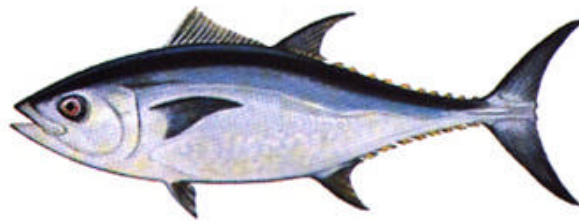


DRAFT ENVIRONMENTAL ASSESSMENT,
REGULATORY IMPACT REVIEW,
AND
INITIAL REGULATORY FLEXIBILITY ANALYSIS
FOR A PROPOSED RULE
TO
REDUCE DISCARDS OF, AND
MODIFY THE TARGET CATCH REQUIREMENTS FOR
PELAGIC LONGLINE VESSELS RETAINING INCIDENTAL CATCH OF,
ATLANTIC BLUEFIN TUNA



United States Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Office of Sustainable Fisheries
Highly Migratory Species Management Division

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Reduce Discards of, and Modify the Target Catch Requirements for Pelagic Longline Vessels Retaining Incidental Catch of, Atlantic Bluefin Tuna

Proposed Action: Reduce discards of, and modify the target catch requirements for pelagic longline vessels retaining incidental catch of, Atlantic bluefin tuna.

Type of statement: Draft Environmental Assessment, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis

Lead Agency: National Marine Fisheries Service (NMFS): Office of Sustainable Fisheries (F/SF)

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Abstract: In April 1999, NMFS adopted a Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks (HMS FMP), that was developed to meet the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). One of the issues discussed during development of the HMS FMP was dead discards of Atlantic bluefin tuna by pelagic longline vessels, which may not target bluefin tuna but sometimes catch them while fishing for swordfish or other tunas. Pelagic longline vessels are authorized to keep some bluefin tuna depending on the amount of target catch they have on board. To reduce bluefin tuna dead discards, the HMS FMP included a final action to close an area off the Mid-Atlantic coast to pelagic longline fishing during the month of June. Also considered in the development of the HMS FMP were adjustments to the regulations on how much target catch longline vessels must retain per trip in order to land the bluefin tuna they catch, although the HMS FMP did not amend these regulations. Reduction of dead discards by modifying the target catch requirements is the subject of this rulemaking. This proposed action is taken under the framework provisions of the HMS FMP, and incorporates additional analyses and regulatory alternatives. This regulatory action would modify the target catch requirements such that pelagic longline vessels must land 2,000 lbs. of other fish in order to land one bluefin tuna on a trip, and 6,000 lbs. of other fish in order to land two bluefin tuna on a trip. This change in the

target catch requirements would be applied to all fishing areas. This regulatory action would also maintain separate quotas for the seasonal fisheries but would adjust the Longline category North/South division line to 31°00' N. latitude and adjust the Longline category subquotas to allocate 70 percent to the southern area and 30 percent to the northern area. Several other alternative modifications to the target catch requirements were considered but are not preferred. This regulatory action would also provide NMFS the inseason authority to modify the bluefin tuna retention limits for pelagic longline vessels by number from a range of zero (closure) to three bluefin tuna per trip and/or by weight within 25 percent of the target catch requirement. The preferred alternative is consistent with the objectives of the HMS FMP and the requirements of the Magnuson-Stevens Act.

FINDING OF NO SIGNIFICANT IMPACT

The National Marine Fisheries Service (NMFS) submitted the regulatory amendment to the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks (HMS FMP) for Secretarial review under procedures of the Magnuson-Stevens Fishery Conservation and Management Act. This proposed rule is accompanied by an integrated document that includes an Environmental Assessment (EA), Regulatory Impact Review, and Initial Regulatory Flexibility Analysis. Copies of the rule and the supporting document are available from Brad McHale at the Highly Migratory Species Management Division, NMFS-Northeast Regional Office, One Blackburn Drive, Gloucester, MA 01930, (978) 281-9260, or from our website at www.nmfs.noaa.gov/sfa/hmspg.html.

The proposed rule would adjust target catch requirements to minimize dead discards of bluefin tuna by pelagic longline vessels and would allow for landing of additional bluefin tuna by such vessels. The EA considers information contained in the Environmental Impact Statement (EIS) associated with the HMS FMP (NMFS, 1999).

Based on the following summary of effects, I have determined that implementation of the approved amendment measures would not have significant effects on the human environment.

Summary of Effects

Rationale

Current target catch requirements for bluefin tuna caught incidentally to pelagic longline operations result in increased bycatch in this fishery and loss of gross revenues. Pelagic longline fishermen are not permitted to target bluefin tuna. In this document, NMFS has developed alternatives to modify target catch requirements so that fewer bluefin tuna would be discarded and more bluefin tuna could be landed, without providing an incentive for targeted bluefin tuna trips. The alternatives considered in the EA would thus increase economic benefits to fishermen and minimize bycatch in the longline fishery. The alternatives considered would have some positive impact on the bluefin tuna stock by reducing dead discards and reducing total mortality, although total landings are not expected to change because the fishery is managed under a total allowable catch system. None of the considered alternatives would likely affect fishing behavior or expand effort in the longline fishery since bluefin tuna are caught incidentally to targeted operations for swordfish and other tunas. In 2000, approximately 80 vessels fishing with pelagic longline gear landed bluefin tuna, although approximately 171 vessels are permitted to do so.

Conclusion

Section 1508.27(b) of the implementing regulations for the Council for Environmental Quality identifies 10 concepts for evaluation of significance.

(1) *Beneficial and Adverse Impacts:* Implementation of the proposed action would reduce dead discards of Atlantic bluefin tuna, which is a management objective of the HMS FMP and part of a management recommendation for bluefin tuna adopted by the International Commission for the Conservation of Atlantic Tunas. Implementation of the proposed action would also have positive impacts on fishermen, who would be able to land more bluefin tuna caught incidentally to swordfish and other tuna longlining operations under the preferred alternative. There would be some positive impacts to the bluefin tuna stock due to a reduction on dead discards and overall mortality. There would not be adverse impacts to other species or the fishery overall because longlining effort is not expected to change as a result of this action.

(2) *Public Safety:* The proposed action would not have any impact on public safety. Fishing activity or behavior would not change and fishing effort would not expand as a result of this proposed action.

(3) *Unique Geographic Areas:* The proposed action would not affect unique geographic areas, other than those areas which have been delineated since target catch levels were established. The proposed action would have positive social and economic impacts in the northern and southern areas, as currently identified in the regulations, by reducing dead discards and allowing retention of incidentally caught bluefin tuna on more trips. Because the proposed action would not change longline activity, there would be no change in impacts on essential fish habitat relative to the status quo.

(4) *Controversial Effects on the Human Environment:* There would not be controversial effects on the human environment. Moreover, fishery participants have been requesting such an action for several years and are expected to support this action. This action has been discussed extensively by the NMFS Highly Migratory Species Advisory Panel, which is composed of representatives from the recreational and commercial fishing industries, the environmental community, academia, and regional and state fishery management authorities. Because this action would not result in increased targeting of bluefin tuna, there would not likely be any controversial aspects of the proposed action.

(5) *Uncertain, Unknown, or Unique Risks:* It is possible that this proposed action would result in increased targeting of bluefin tuna. However, this is very unlikely given the costs/benefits associated with pelagic longline fishing directed at bluefin tuna and the maintenance of target catch requirements. There are no effects on the human environment that are highly uncertain or that involve unique or unknown risks.

(6) *Precedence:* The proposed action does not establish new precedence. Target catch requirements are already in place in this fishery and NMFS currently has inseason authority to modify retention limits in other segments of the bluefin tuna fishery. This action merely modifies existing requirements to benefit fishermen and minimize bycatch.

(7) *Cumulative Impacts:* The proposed action modifies existing target catch requirements for the highly regulated Atlantic pelagic longline fishery, which should have positive cumulative ecological, social, and economic impacts. It is unlikely that there will be any adverse, cumulative impacts on the environment from the preferred and other considered alternatives because they are not expected to change current fishing practices or effort or cause impacts not previously addressed.

(8) *Adverse Effects on Resources:* The effects of the proposed action would not apply to any sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources. Should such structures or resources be located in the Exclusive Economic Zone (EEZ), longline vessels would already avoid those areas to avoid potential gear loss.

(9) *Endangered Resources:* The proposed action would not alter current impacts on threatened or endangered species. The action would not modify fishing behavior or gear type, nor would it expand fishing effort. Longlines are known to present potential dangers to listed sea turtles and marine mammals, and the activity of the fishery is regulated by the terms of a Biological Opinion dated June 14, 2001.

(10) *Other Environmental Laws:* The proposed action would not have an impact on State or local regulations inside or outside the EEZ. The proposed action would not likely change fishing activity as it only allows for more of the bluefin tuna that are incidentally caught to be landed.

For the reasons stated above, implementation of this regulatory amendment, which would modify target catch requirements for landing western Atlantic bluefin tuna in the Atlantic pelagic longline fishery and provide NMFS with inseason authority to modify bluefin tuna retention limits by pelagic longline vessels, would not significantly affect the quality of the human environment, and preparation of an EIS on the action is not required by Section 102(2)(c) of National Environmental Policy Act or its implementing regulations.

Approved: _____
Assistant Administrator for Fisheries

Date

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1.0 Purpose and Need for Action

One of the goals of the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks (HMS FMP), consistent with National Standard 9 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), is to minimize bycatch and bycatch mortality in the highly migratory species (HMS) fisheries. The purpose of this rulemaking is to reduce the level of bluefin tuna that is discarded dead by vessels in the Atlantic pelagic longline fishery. The Environmental Assessment (EA), Regulatory Impact Review (RIR), and Initial Regulatory Flexibility Analysis (IRFA) analyze several alternatives to achieve this goal, including the adjustment of target catch requirements for landing the incidental catch of bluefin tuna by pelagic longline vessels.

The Atlantic pelagic longline fishery, which commonly targets swordfish, sharks, and yellowfin and bigeye tunas, also occasionally catches bluefin tuna incidentally to these other fisheries. Because the U.S. longline fleet has not historically targeted bluefin tuna, the portion of the U.S. national bluefin tuna quota allocated to the longline category has always been intended to account for incidental catch only. Accordingly, under current bluefin tuna regulations, vessels permitted in the Atlantic tunas Longline category are permitted to retain and land bluefin tuna caught with pelagic longline gear only if a specific minimum level of other fish species are landed from the same trip. While the regulations pertaining to landing incidental bluefin tuna catch have been adjusted on several occasions, the pelagic longline industry continues to comment and data suggest that the target catch requirements result in unnecessary dead discards, while the quota allocated to account for these incidental catches remains unused. The history of U.S. regulatory activity and public comment regarding this issue dates back to the early 1980s. A full description of this history is provided in the HMS FMP in Chapter 3, section 3.5.3 “Management Measures to Address Bycatch Problems,” and is also described below in Section 1.1.

The HMS FMP includes a suite of management objectives for all of the highly migratory species. The following objectives are particularly pertinent to this rulemaking on the bluefin tuna target catch requirements for longline vessels:

- ▶ Consistent with other objectives of this FMP, to manage Atlantic HMS fisheries for continuing optimum yield so as to provide the greatest overall benefit to the Nation, particularly with respect to food production, providing recreational opportunities, preserving traditional fisheries, and taking into account the protection of marine ecosystems. Optimum yield is the maximum sustainable yield from the fishery, reduced by any relevant social, economic, or ecological factors;
- ▶ To minimize, to the extent practicable, bycatch of living marine resources and the mortality of such bycatch that cannot be avoided in the fisheries for Atlantic tuna, swordfish, and sharks;

- ▶ To minimize, to the extent practicable, economic displacement and other adverse impacts on fishing communities during the transition from overfished fisheries to healthy ones;
- ▶ To better coordinate domestic conservation and management of the fisheries for Atlantic tuna, swordfish, sharks, and billfish, considering the multispecies nature of many HMS fisheries, overlapping regional and individual participation, international management concerns, historical fishing patterns and participation, and other relevant factors.

The purpose of this framework action is to meet the above objectives established by the HMS FMP, the Magnuson-Stevens Act National Standards and National Standard Guidelines, and the International Commission for the Conservation of Atlantic Tunas (ICCAT) recommendation to rebuild bluefin tuna in the western Atlantic Ocean. A change to the target catch requirements for bluefin tuna retention by pelagic longline vessels is found to be consistent with the HMS FMP management objectives. In this EA/RIR/IRFA, NMFS considers the biological, social, and economic impacts of a range of management measures to reduce dead discards of bluefin tuna in the pelagic longline fishery based on reviews of landings, logbook, and observer data with the objectives of allowing the retention of truly incidentally caught BFT while preventing a directed fishery and reducing discards. A preferred alternative is identified for which NMFS is publishing proposed regulations, in accordance with the National Environmental Policy Act and other applicable laws. This alternative is preferred due to its consistency with the objectives of the HMS FMP, the Magnuson-Stevens Act, and the 1998 ICCAT recommendation for western Atlantic bluefin tuna stock rebuilding.

1.1 Regulatory History

In 1977, NMFS implemented an incidental catch limit of bluefin tuna for all gear types (other than Traps that could land one bluefin tuna every 30 days) that caught bluefin tuna but were not part of a directed bluefin fishery (42 FR 30373, June 14, 1977). This regulation required that fishermen could only retain bluefin tuna if they participated in a non-directed fishery and if the weight of the bluefin tuna on board was less than one percent of the weight of all the fish on board.

During the 1980 winter/spring longline fishery in the Gulf of Mexico, a number of U.S. longline vessels fishing for swordfish began to land increasing quantities of giant bluefin tuna. NMFS was concerned that without immediate action there could be substantial investment in fishing gear and processing facilities by the U.S. industry in developing a directed longline fishery for bluefin tuna in the Gulf of Mexico, a known spawning area for bluefin tuna. There was also concern that, under the regulations at the time, longline catches could severely and negatively affect the other fisheries in the Gulf of Mexico and Mid-Atlantic areas. As a result of these concerns, NMFS published a final rule dated January 26, 1981 (46 FR 8012), which prohibited the use of longlines in a directed bluefin tuna fishery, implemented an incidental catch limit of bluefin tuna, and established two management areas north and south of 36° N. latitude where different catch limits would apply. South of 36° N. latitude, longline fishermen were restricted to

two bluefin tuna per vessel per trip, whereas north of 36° N. latitude, they were restricted to two percent by weight of all other fish on board at the end of the fishing trip (weigh-out facilities in the southern area were deemed inadequate to allow practical application of the two percent rule).

In 1982, ICCAT recommended a ban on directed fishing for bluefin tuna in the Gulf of Mexico to protect the spawning stock. This action primarily affected Japanese longline fishermen in the area, as U.S. longline gear had already been prohibited from targeting bluefin tuna in the Gulf of Mexico. However, concern remained over the adequacy of the incidental catch limits, particularly regarding the efficacy of the restriction at reducing bycatch mortality of bluefin tuna. NMFS' examination of available longline fishery data regarding discarded bluefin tuna in the Gulf of Mexico revealed that more than 80 percent of those bluefin tuna released were dead.

In 1983, in an attempt to accommodate the expansion of the Atlantic and Gulf of Mexico longline fishery, NMFS increased and then subdivided the incidental bluefin tuna quota for longline fishermen (48 FR 27745, June 17, 1983).

On January 6, 1992 (57 FR 365), NMFS determined that the incidental catch limit in the southern area was not effective at reducing bluefin tuna bycatch mortality and changed the restriction for this area. Until that time, the bycatch restriction of up to two bluefin tuna per trip, without any requirement that the bluefin tuna be landed in conjunction with other species, and the short distance from shore to the fishing grounds, made it feasible for vessels to direct their fishing on bluefin tuna, despite the retention limit. As this activity ran counter to the intent to prohibit directed fishing of bluefin tuna by longline gear, the final regulations required longline vessels operating in the southern area (south of 36° N. latitude) to land, offload and sell at least 2,500 lbs. of other species as a condition for landing a maximum of one bluefin tuna.

After this action was implemented, NMFS received several comments indicating that the new bycatch restriction in the southern area caused an increase in bluefin tuna discards and waste. Consequently, NMFS conducted scoping meetings on this issue and examined several options that included: 1) requiring special gear; 2) requiring a minimum number of days between a vessel's landings; and 3) reviewing the minimum target catch requirements. Recommendations also included prohibiting bluefin tuna catches in the Gulf of Mexico or, conversely, working through ICCAT to rescind the prohibition and allow limited directed fishing.

On January 19, 1994 (59 FR 2814), NMFS proposed to amend the minimum landing requirements to adjust for seasonal variation in the target fisheries. At that time, NMFS maintained that it was possible to conduct directed fishing on species other than bluefin tuna with only a limited amount of bluefin tuna catch, and that requiring threshold amounts of bluefin tuna to be landed ensures that bluefin are harvested only as bycatch incidentally to fishing for other species. However, NMFS also stated in this *Federal Register* notice that "if evidence indicates this is not true, NMFS may consider more stringent measures, such as area or season closures or gear restrictions, in future rulemaking." On April 14, 1994 (59 FR 17723), NMFS published a final rule that changed the directed fishery minimum weight requirement on landing one bluefin

tuna, for the southern area only, from at least 2,500 lbs. to 1,500 lbs. during the months from January to April, and to 3,500 lbs. from May through December. In that final rule, the existing catch restrictions were not adjusted for the northern area.

At the same time that NMFS modified the target catch requirements for the southern area, NMFS also modified the geographic separation between the northern and southern management areas by adjusting the dividing boundary south to 34° N. latitude (59 FR 17723, April 14, 1994). This was primarily because the previous location at 36° N. latitude was located in a particularly dynamic oceanographic area where vessels fishing on one side of the line may find themselves transported by currents to the other side. This division line adjustment prompted comments regarding division of quota and specification of landings requirements affecting the northern and southern subcategories of the incidental longline category.

In addition, NMFS received numerous written comments that the landings requirements applicable in the northern area cannot be met by vessels in the shark longline fisheries operating off of North Carolina in the winter months, due to the retention limits in effect under the shark fishery management plan. Participants in this winter shark fishery have noted that the bluefin tuna and shark regulations, taken together, force discarding of bluefin tuna, e.g., the 4,000 lb. dressed weight large coastal shark retention limit allows retention of an 80 lb. bluefin tuna, which is below the minimum commercial size. These fishermen requested an allowance to land and market fish that would otherwise be discarded dead, thus increasing boat revenues without contributing to additional bluefin tuna mortality. Also, despite these ongoing efforts to reduce discards by changing target catch requirements and adjusting dividing lines, U.S. bluefin tuna dead discards increased in 1995 to a total of approximately 142 mt.

In response to these comments, and the relatively high number of discards reported to ICCAT, NMFS undertook a review of the bluefin tuna incidental catch regulations, including division of the quotas, the position of the dividing line between the northern and southern subcategories, and landing criteria applicable to each management area. Observer data from longline trips taken from 1991 to 1994 indicated that two or fewer bluefin tuna were hooked on 91 percent of all observed trips. NMFS also analyzed landings information to determine trends in landings by time and area. NMFS published the results of its review in an Advanced Notice of Proposed Rulemaking (ANPR), published on September 17, 1996 (61 FR 48876).

In the ANPR, NMFS requested public comments on possible changes to the regulations to reduce incidental mortality of bluefin tuna while allowing for commercial use of unavoidable bycatch. Various proposals were presented and several public comments were received during the comment period on the ANPR. Many of the proposals called for various changes to the target catch limits and/or moving the dividing line between management areas while other comments raised concern over providing an incentive for a directed fishery and advocated use of time/area closures to address the problem of discards.

In response to the 1996 ICCAT recommendation that called for the United States to adopt measures designed to reduce discards of bluefin tuna during 1997 and 1998, and since publication of the ANPR and receipt of comments, NMFS examined different options for reducing dead discards. NMFS considered a variety of options, including changing the current target weight requirement, limiting the number of days per trip, and implementing time/area closures. Logbook and dealer weighout slips from 1991 through 1995 were collected, and initial results indicated significant differences between the number of bluefin tuna caught and discarded per trip by season and region.

Analyses of bluefin tuna discard data continued through 1998, the preliminary results of which were presented to the HMS and Billfish Advisory Panels (APs) in March and July 1998. The 1998 ICCAT Recommendation on western Atlantic bluefin tuna requires that all Contracting Parties, including the United States, minimize dead discards of bluefin tuna to the extent practicable. The Recommendation also established a 79 mt allowance for dead discards for the western Atlantic, of which the United States was allocated 68 mt. If a country has dead discards in excess of their allowance, they must be counted against that country's landing quota for the following year. If there are fewer dead discards, then half of the underharvest may be added to the following year's quota while the other half is conserved. Dead discards of bluefin tuna are reported to ICCAT by NMFS, along with landings data, and are summarized in the U.S. National Report which is transmitted to ICCAT annually.

The final rule that implemented the HMS FMP in 1999 addressed the dead discard issue by establishing a time/area closure for the use of pelagic longline gear in the Northwestern Atlantic from 39° to 40° N. latitude and 68° to 74° W. longitude during the month of June (See Figure 1). This closed area was chosen to meet the goal of minimizing bluefin tuna dead discards while having the least economic impact on the directed pelagic longline fisheries. The HMS FMP also considered, but did not implement, further modifications to target catch requirements because of the difficulty in determining catch levels and landings allowances that would likely reduce dead discards. The lack of correlation between the level of target catch and bluefin tuna discards indicated that bluefin tuna catches were truly incidental. While an area closure was selected as the most expedient means of reducing dead discards, NMFS also concluded that future analyses of catch rates may provide guidance for a change in the target catch requirements. Since NMFS first implemented bluefin tuna incidental catch regulations, the agency has received public comment and inquiries regarding the target catch requirements to retain incidental catch of bluefin tuna and the effectiveness of the regulations in avoiding dead discards. These comments have continued after the publication of the HMS FMP.

Since adoption of the HMS FMP and its measures to reduce dead discards of bluefin tuna, the target catch requirements for retention of bluefin tuna by pelagic longline vessels have continued to be discussed. Industry has continued to comment that the target catch requirements are overly restrictive and result in unnecessary dead discards of bluefin tuna. NMFS analyzed additional data on the landing patterns of longline vessels, and published another ANPR in the *Federal Register* on November 17, 2000 (65 FR 69492). The members of the HMS and Billfish

APs discussed the target catch requirements at their meetings in April 2001 and 2002, and were generally in favor of NMFS adjusting the target catch requirements so that pelagic longline vessels could land more of the bluefin tuna they caught incidentally to fishing for other species, so long as the changes to the target catch requirements did not result in incentive to target bluefin tuna and/or cause additional dead discards. See Appendix 1 for a summary of the APs' discussions of the target catch requirements.

For any of the following alternatives, if NMFS determines that the United States' annual dead discard allowance has been exceeded, NMFS would subtract the amount in excess of the allowance from the total amount of bluefin tuna that can be landed. If NMFS determines that the annual dead discard allowance has not been reached, NMFS may add one half of the remainder to the total amount of bluefin tuna that can be landed.

1.2 The Fishery Management Plan and the Framework Process

Since April 1999, NMFS has been managing the Atlantic tunas fisheries under the dual authority of the Magnuson-Stevens Act and the Atlantic Tunas Convention Act (ATCA). The HMS FMP established a framework procedure for adjustment of the regulations necessary to achieve the management objectives in the HMS FMP. The framework process requires a public comment period and at least one public hearing, consistent with the Administrative Procedures Act. For further information on the FMP and framework processes, see Chapter 3 of the HMS FMP.

1.3 Endangered Species Act and Marine Mammal Protection Act

If adopted, the preferred alternative in this EA/RIR/IRFA would not be expected to increase endangered species or marine mammal interaction rates. On June 14, 2001, NMFS issued a Biological Opinion (BiOp) after concluding formal consultation for the HMS fisheries under Section 7 of the Endangered Species Act. The BiOp concluded that the pelagic longline fishery is likely to jeopardize the continued existence of threatened or endangered species. NMFS has implemented the reasonable and prudent alternatives from the BiOp, and the preferred alternative from this EA/RIR/IRFA is consistent with, and would not adversely affect, NMFS' actions to implement the reasonable and prudent alternatives required by the BiOp. If adopted, the preferred alternative of this EA/RIR/IRFA would not likely increase takes of listed species, nor foreclose the use of other alternatives for managing the Atlantic pelagic longline fleet and reducing adverse impacts on protected resources.

1.4 Impacts on Essential Fish Habitat

The Magnuson-Stevens Act established a program to promote the protection of essential fish habitat (EFH) in the review of projects conducted by Federal agencies, or under Federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. After the Secretary has identified EFH, Federal agencies are obligated to consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH.

In the HMS FMP, the area in which this action is planned has been identified as EFH for species managed by the New England Fishery Management Council, the Mid-Atlantic Fishery Management Council, the South Atlantic Fishery Management Council, the Gulf of Mexico Fishery Management Council, the Caribbean Fishery Management Council, and the Highly Migratory Species Management Division of NMFS. It is not anticipated that this action would have any adverse impacts to EFH and therefore no consultation is required.

2.0 Alternatives

This section describes the alternatives considered in this EA/RIR/IRFA. Section 2.1 describes the alternatives considered regarding changing the target catch requirements for bluefin tuna retention by pelagic longline vessels. Section 2.2 presents the three alternatives NMFS considered regarding moving the North/South division line and modifying the bluefin tuna quota distribution between the northern and southern areas within the Longline category. Section 2.3 presents the three alternatives NMFS considered regarding providing the Agency authority to adjust the bluefin tuna trip limits for longline vessels during the season. The alternatives are evaluated in Section 5.

2.1 Approach One: Adjusting Target Catch Requirements for Bluefin Tuna Retention by Pelagic Longline Vessels

The following alternatives represent the range of options considered by NMFS regarding changing the target catch requirements for bluefin tuna retention by pelagic longline vessels. The alternatives range from no action (status quo) to adjusting the target catch requirements in all areas and moving the North/South division line and/or adjusting the bluefin tuna quota distribution between the northern and southern areas, and varying the target catch requirements seasonally.

2.1.1 Alternative 1: No Action/Status Quo

This alternative would maintain the status quo, in which the HMS regulations require that the weight of bluefin tuna landed by longline vessels north of 34° N. latitude be no more than two percent of the total weight of the other catch landed for a trip. South of 34° N. latitude, pelagic longline vessels are allowed one bluefin tuna per trip, provided that they land 1,500 lbs. of other catch from the same trip from January through April, and 3,500 lbs. of other catch from the same trip from May through December.

2.1.2 Alternative 2: Adjust Target Catch Requirements in Northern Area from Two Percent to 3,500 lbs. of Other Catch to Retain One Bluefin Tuna

This alternative would adjust the target catch requirements to allow pelagic longline vessels landing north of 34° N. latitude to land one bluefin tuna per trip, provided they also land 3,500 lbs. of other catch from the same trip. This alternative would not modify the target catch requirements south of 34° N. latitude.

2.1.3 Alternative 3: Adjust Target Catch Requirements in Northern Area to 3,500 lbs. of Other Catch to Retain One Bluefin Tuna, and 6,000 lbs. of Other Catch to Retain Two Bluefin Tuna

This alternative would adjust the target catch requirements to allow pelagic longline vessels landing north of 34° N. latitude to land one bluefin tuna per trip, provided they also land 3,500 lbs. of other catch from the same trip, or two bluefin tuna per trip, provided they also land 6,000 lbs. of other catch from the same trip. This alternative would not modify the target catch requirements south of 34° N. latitude.

2.1.4 Alternative 4: Adjust Coastwide Target Catch Requirements to 3,500 lbs. of Other Catch to Retain One Bluefin Tuna, and 6,000 lbs. of Other Catch to Retain Two Bluefin Tuna, with Southern Area allowed One Bluefin Tuna with only 1,500 lbs. from January through April

This alternative would adjust the target catch requirements to allow pelagic longline vessels in all areas to land one bluefin tuna per trip, provided they also land 3,500 lbs. of other catch from the same trip, or two bluefin tuna per trip, provided they also land 6,000 lbs. of other catch from the same trip. However, from January through April, this alternative would allow pelagic longline vessels landing south of 34° N. latitude to land their one bluefin tuna per trip with only 1,500 lbs. of other fish from the same trip.

2.1.5 Alternative 5: Adjust Coastwide Target Catch Requirements to 2,000 lbs. of Other Catch to Retain One Bluefin Tuna, and 6,000 lbs. of Other Catch to Retain Two Bluefin Tuna (Preferred Alternative)

This alternative would adjust the target catch requirements to allow pelagic longline vessels in all areas and times to land one bluefin tuna per trip, provided they also land 2,000 lbs. of other catch from the same trip, or two bluefin tuna per trip, provided they also land 6,000 lbs. of other catch from the same trip.

2.1.6 Alternative 6: Adjust Coastwide Target Catch Requirements to 1,500 lbs. of Other Catch to Retain One Bluefin Tuna, and 6,000 lbs. of Other Catch to Retain Two Bluefin Tuna

This alternative would adjust the target catch requirements to allow pelagic longline vessels in all areas and times to land one bluefin tuna per trip, provided they also land 1,500 lbs. of other catch from the same trip, or two bluefin tuna per trip, provided they also land 6,000 lbs. of other catch from the same trip.

2.2 Approach Two: Moving the North/South Division and Reallocating Quota between Areas

The following alternatives represent three options considered by NMFS regarding moving the North/South division line and reallocating Longline category bluefin tuna quota. The purpose of moving the division line and reallocating quota would be to find a division line that better reflects the seasonal and other differences in the northern and southern fisheries. In addition, the division line should not be near an area where fish are usually landed, i.e., it should be clear that fish caught in a particular area will be landed in that area. Adjusting the quota between the two zones would be done to adjust for the increase/decrease in area for each zone. The two alternatives considered are discussed below.

2.2.1 Alternative 1: No Adjustment in Longline Category North/South Division Line or Subquotas (No Action/Status Quo)

This alternative would maintain the status quo, with the North/South division line at 34° N. Latitude, and would maintain the quota allocation between the two areas at 78.9 percent for the southern area and 21.1 percent for the northern area.

2.2.2 Alternative 2: Move North/South Division Line to 31°00' N. latitude, and Change Subquota Allocation to 70/30 Percent for the Southern/Northern Areas (Preferred Alternative)

This alternative would move the Longline category North/South division line to 31°00' N. latitude near Jekyll Island, Georgia, and adjust the Longline category subquotas to allocate 70 percent to the southern area and 30 percent to the northern area.

2.2.3 Alternative 3: Eliminate North/South Division Line and Establish One Longline Category Quota for All Areas

This alternative would eliminate the Longline category North/South division line and establish one quota for the Longline category for all areas.

2.3 Approach Three: Inseason Adjustment Authority for Target Catch Requirements

The following alternatives represent three options considered by NMFS regarding inseason authority to modify bluefin tuna retention limits by pelagic longline vessels. The purpose of providing NMFS inseason authority to adjust the target catch requirements for bluefin tuna retention by longline vessels would be to increase the likelihood of meeting the management objectives for the bluefin tuna fishery on an inseason basis. The three alternatives considered are discussed below.

2.3.1 Alternative 1: No Inseason Adjustment Authority (No Action/Status Quo)

This alternative would maintain the status quo, in that NMFS does not have the authority to adjust the amount of bluefin tuna that could be retained by longline vessels on a trip within a season. The limits and target catch requirements would be fixed, and NMFS could only close the fishery when the quota (or area subquota) was reached. Any subsequent adjustments would require notice and comment rulemaking.

2.3.2 Alternative 2: Provide NMFS with Inseason Adjustment Authority to Adjust the Bluefin Tuna Retention Limits by Number of Fish Only

This alternative would provide NMFS with authority to adjust the bluefin tuna retention limits for pelagic longline vessels from a range of zero to three fish per trip. NMFS would be able to adjust the limits through an inseason action, with 21 days public notice. This authority would be similar to the inseason authority NMFS has to adjust the General category bluefin tuna daily retention limit from zero to three bluefin tuna per vessel. This alternative would not provide NMFS the inseason authority to adjust the target catch requirements for bluefin tuna retention (e.g. 3,500 lbs. to 3,000 lbs.).

2.3.3 Alternative 3: Provide NMFS with Inseason Adjustment Authority to Adjust the Bluefin Tuna Retention Limits by Number of Fish and Target Catch Requirement by Weight (Preferred Alternative)

This alternative would provide NMFS with authority to adjust the bluefin tuna retention limits for pelagic longline vessels by number from a range of zero to three fish per trip and by weight within 25 percent of the target catch requirements (e.g., 2,000 lbs. to 2,500 lbs.). NMFS would be able to adjust the limits through an inseason action, with 21 days public notice. This authority would be similar to the inseason authority NMFS has to adjust the General category bluefin tuna daily retention limit from zero to three bluefin tuna per vessel.

2.4 Alternatives Preliminarily Considered but Rejected

In developing the above alternatives, NMFS identified several additional alternatives that were considered preliminarily but then rejected. These included alternatives that would use a

percentage of target catch to determine the amount of bluefin tuna that could be retained, an approach currently used for vessels landing bluefin north of 34° N. latitude. The rationale for rejecting alternatives using percentages of target catch, as well as other methods for addressing discards of bluefin tuna by pelagic longline vessels, is explained below.

Defining Target Catch Requirements in Percentage Terms

Current target catch requirements for areas north of the 34° N. latitude boundary line are based on a percentage: bluefin tuna landings cannot exceed two percent of the weight of the rest of the landed catch. One way to modify the current regulations would be to increase the percentage so that more bluefin tuna could be landed. However, at the HMS and Billfish AP meeting in April 2001, several NMFS Enforcement Special Agents explained that target catch requirements would be more easily enforced if the amount of bluefin tuna allowed to be retained was defined by a number of fish and not by a percentage. In order to enforce a percentage of target catch requirement, enforcement agents would need to observe entire weighouts and be concerned with the exact weight of the bluefin tuna and other landings, which would not be an efficient use of NMFS-limited enforcement resources. With the retention of bluefin tuna defined in terms of a number of fish, agents would only need to inspect the offloading to determine the number of bluefin tuna landed and the general weight of the other catch.

Alternative Methods of Addressing Bluefin Tuna Discards

In the Revised Final Environmental Impact Statement (EIS) for the HMS FMP, NMFS considered several alternatives for reducing dead discards of incidentally caught bluefin tuna by pelagic longline vessels and selected a final action that closed the Mid-Atlantic Bight during the month of June. NMFS examined and rejected several other alternatives, including adopting the “Canadian model” for dealing with bluefin bycatch and closing all longline fisheries once any HMS quota was reached. Refer to Section 3.5.3 of the HMS FMP for additional information on these alternatives. While these previously-examined alternatives were not reconsidered at this time, these alternatives, as well as additional time/area closures and other approaches for dealing with dead discards of bluefin tuna, may be considered in the future either through framework adjustments or an FMP amendment.

3.0 Description of the Fishery and Affected Environment

3.1 The U.S. Pelagic Longline Fishery

The U.S. Atlantic pelagic longline fleet operates in all areas of the Atlantic Ocean from the Grand Banks to the Gulf of Mexico (and sometimes even further south). Caribbean and South Atlantic vessels are generally smaller and tend to operate only regionally, while larger vessels may traverse several regions on a seasonal basis. Pelagic longline operations encounter many species of fish; some of those captured are marketable and thus are retained, others are discarded for

economic or regulatory reasons. Species frequently encountered are swordfish, tunas, and sharks, as well as billfish, dolphin, wahoo, king mackerel, and other finfish species. Occasionally, pelagic longline gear also interacts with sea turtles, marine mammals, and sea birds, known collectively as “protected” species. All of these species are Federally managed, and NMFS seeks to control the mortality of regulated or protected species that results from fishing operations. Detailed descriptions of the life histories and population status of these species are given in the HMS FMP and are not repeated here. Management of declining fish populations requires reductions in fishing mortality from both directed and incidental fishing sources. The status of the stocks of Atlantic swordfish, Atlantic billfish, Atlantic tunas, large coastal and pelagic sharks are summarized in Chapter 2 of the 2002 Stock Assessment and Fishery Evaluation for HMS (SAFE Report, NMFS 2002), and are not repeated here. For a complete description of the U.S. pelagic longline fishery, including operations, catches, and discards, please see the HMS FMP, the 2002 SAFE Report, and the July 2002 Final Supplemental Environmental Impact Statement for Regulatory Amendment 2 to HMS FMP to Reduce Sea Turtle Bycatch and Bycatch Mortality in Highly Migratory Species Fisheries (NMFS 2002a).

3.1.1 Bluefin Tuna Catches, Landings and Discards in the U.S. Pelagic Longline Fishery

The United States is allocated 1,387 mt of western Atlantic bluefin tuna under the ICCAT Rebuilding Program and the bluefin tuna Longline category is allocated 8.1 percent of the total U.S. bluefin tuna landings quota. The Longline category quota is split between northern and southern areas, with 78.9 percent allocated to the southern area and 21.1 percent allocated to the northern area. Initial bluefin tuna quotas and landings in the Longline category are shown in Table 1. Estimates of bluefin tuna discarded dead by pelagic longline vessels, calculated using logbook tallies are provided in Table 2. Logbook estimates of dead discards for the 2000 fishing year totaled 30 mt. In 1997 and 1998, discards were higher proportionally (dead discards to bluefin tuna landed) in the northern area compared to the southern area (mostly Gulf of Mexico), but this relationship changed in 1999 and 2000, where a higher proportion of the dead discards being reported through the pelagic logbook occurred in the southern area. Figures 2 and 3 show graphically the areas and magnitude of bluefin tuna catches and discards by pelagic longline vessels for 1997-1999.

Several reviews of landings, logbook, and observer data have been conducted in recent years regarding the pelagic longline fishery interactions with bluefin tuna. Observer data for 1991 through 1994 indicate that two or fewer bluefin tuna were hooked on 91 percent of all observed longline trips. Observer data for 1998 through 2000 indicate that two or fewer bluefin tuna were caught on 88 percent of all observed pelagic longline trips, and two or fewer bluefin tuna were caught on 58 percent of those trips that caught bluefin tuna (See Figure 4).

Trip level longline landings information for 1998 through 2000 are presented in Tables 3a through 3d, showing average, median and 75th percentile landings for pelagic longline trips. In compiling the data for these tables, NMFS excluded those pelagic longline trips with less than 300 lbs. of landed catch. These smaller trips are not likely to catch a bluefin tuna, and many of them

occurred on the east coast of Florida, where pelagic longline fishing is now prohibited (see 65 FR 47214). Table 3a presents average, median, and 75th percentile landings data for all pelagic longline trips that landed more than 300 lbs. of fish. Because the target catch requirements are based on the amount of landed catch of species other than bluefin tuna, the weight of the bluefin tuna landed on the pelagic longline trips was excluded in compiling the data for Table 3a. Table 3b presents similar information to Table 3a, but excludes all trips in which bluefin tuna were landed. This was done to eliminate any potential bias in the data that may occur due to vessels increasing the length of their trip (to increase their catch) to meet the bluefin tuna target catch requirements. Tables 3c and 3d show similar information to Tables 3a and 3b, but include South Carolina and Georgia in the northern area (as would be the case if the preferred alternative was implemented).

Table 3a shows that median values for landed catch (not including bluefin tuna) were 3,074 lbs. (1,394 kg) for trips made in the months of January through April, and 3,526 lbs. (1,599 kg) for trips made in May through December, in fisheries south of 34° N. latitude; and 3,787 lbs. (1,718 kg) for trips made throughout the year in fisheries north of 34° N. latitude. Year-round south of 34° N. latitude, median trip level landings were 3,336 lbs. (1,513 kg). For the same time period, 75 percent of the trips had a landed catch (other than bluefin tuna) of at least 1,245 lbs. (565 kg) for trips made in the months of January through April, and 1,384 lbs. (628 kg) for trips made in May through December, in fisheries south of 34° N. latitude; and 1,786 lbs. (810 kg) for trips made throughout the year in fisheries north of 34° N. latitude. Throughout the year south of 34° N. latitude, 75 percent of all trips landed at least 1,343 lbs. (609 kg).

Table 3b shows that median values for landed catch on trips that did not land bluefin tuna were 2,770 lbs. (1,256 kg) for trips made in the months of January through April, and 3,388 lbs. (1,537 kg) for trips made in May through December, in fisheries south of 34° N. latitude; and 3,474 lbs. (1,576 kg) for trips made throughout the year in fisheries north of 34° N. latitude. Year-round south of 34° N. latitude, median trip level landings were 3,128 lbs. (1,419 kg). For the same time period, 75 percent of the longline trips that did not land bluefin tuna had a landed catch of at least 1,060 lbs. (481 kg) for trips made in the months of January through April, and 1,344 lbs. (610 kg) for trips made in May through December, in fisheries south of 34° N. latitude; and 1,634 lbs. (741 kg) for trips made throughout the year in fisheries north of 34° N. latitude. Throughout the year south of 34° N. latitude, 75 percent of all trips landed at least 1,236 lbs. (561 kg).

Including South Carolina and Georgia in the northern area does not significantly alter the average, median, or 75th percentile trip-level landings calculated for pelagic longline vessels in either the northern or southern areas. Table 3c shows that median values for landed catch (not including bluefin tuna) were 3,220 lbs. (1,461 kg) for trips made in the months of January through April, and 3,570 lbs. (1,519 kg) for trips made in May through December, in fisheries south of 31° N. latitude; and 3,586 lbs. (1,627 kg) for trips made throughout the year in fisheries north of 31° N. latitude. Year-round south of 34° N. latitude, median trip level landings were 3,452 lbs. (1,566 kg). For the same time period, 75 percent of the trips had a landed catch (other than

bluefin tuna) of at least 1,249 lbs. (567 kg) for trips made in the months of January through April, and 1,337 lbs. (606 kg) for trips made in May through December, in fisheries south of 31° N. latitude; and 1,718 lbs. (779 kg) for trips made throughout the year in fisheries north of 31° N. latitude. Throughout the year south of 31° N. latitude, 75 percent of all trips landed at least 1,301 lbs. (590 kg).

Table 3d shows that median values for landed catch on trips that did not land bluefin tuna were 2,880 lbs. (1,306 kg) for trips made in the months of January through April, and 3,421 lbs. (1,552 kg) for trips made in May through December, in fisheries south of 31° N. latitude; and 3,253 lbs. (1,476 kg) for trips made throughout the year in fisheries north of 31° N. latitude. Year-round south of 34° N. latitude, median trip level landings were 3,217 lbs. (1,459 kg). For the same time period, 75 percent of the longline trips that did not land bluefin tuna had a landed catch of at least 1,040 lbs. (472 kg) for trips made in the months of January through April, and 1,344 lbs. (575 kg) for trips made in May through December, in fisheries south of 31° N. latitude; and 1,615 lbs. (733 kg) for trips made throughout the year in fisheries north of 31° N. latitude. Throughout the year south of 31° N. latitude, 75 percent of all trips landed at least 1,177 lbs. (534 kg).

These tables show that the trips that did not land bluefin tuna were generally smaller than those that did, which may be attributable to the incentive to meet the target catch requirements, but they also show that there is not much of a difference in landings levels between the northern and southern areas, or a large seasonal difference in the southern area. For example, median trip level landings south of 31° N. latitude (3,452 lbs.) are very similar to those north of 31° N. latitude (3,586 lbs.). In addition, median trip level landings south of 31° N. latitude are only a few hundred pounds lower during January through April (3,220 lbs.) than they are from May through December (3,570 lbs.). This indicates that different target catch requirements in the northern and southern areas, and seasonal differences in the target catch requirements in the southern area, may no longer be warranted given the current operations of the fleet.

3.1.2 Compliance with Target Catch Requirements

In 2000, NMFS conducted an analysis of trip-level pelagic longline landings of bluefin tuna and other species to assess compliance-related issues with the current target catch requirements. The analysis showed that for the years 1995-1999, less than ten percent of the trips that landed bluefin tuna in the northern area landed the required amount of target catch. The compliance rate in the southern area was greater over the same time period, with over 93 percent of the trips landing the required level of target catch. In May 2000, NMFS mailed a letter to all pelagic longline vessel owners reminding them of the regulations, and subsequently, compliance with the target catch requirements improved. Preliminary analysis of 2000 longline landings show that most trips that land bluefin tuna in the northern area are now also landing the required level of target catch. The amount of pelagic longline landings of bluefin tuna decreased in 2000 compared to 1998 and 1999, which is consistent with increased compliance with the target catch

regulations (See Table 1). However, if interaction rates have remained unchanged, this also indicates that dead discards have increased.

3.1.3 Evaluation of Closed Area in June to Decrease Bluefin Tuna Bycatch in the Pelagic Longline Fishery

The effectiveness of the closed area established in 1999 to reduce dead discards of bluefin tuna by pelagic longline vessels was evaluated in the 2001 and 2002 HMS SAFE Reports. A portion of the latest evaluation is presented here. The number of bluefin tuna landed and discarded by month and year is reported in the pelagic logbook. Tables 4 and 5 provide an enumeration of logbook submissions of the disposition of bluefin tuna catches (kept, discarded dead, discarded alive). It should be noted that this information does not consider the pooling method utilized to report dead discards of bluefin tuna and other species to ICCAT. The pooling method was used to estimate mortality rates for stock assessment by the SCRS, but was not used for Task I data submission or to evaluate compliance with the ICCAT recommendations regarding the dead discard allowance. In Table 4, the rows designated as “closed” represent the area in the Northeast/Mid-Atlantic Bight closed to pelagic longline fishing during the month of June. “Open” represents all other areas in the Atlantic Ocean. The portion of Table 5 designated as “Closed” represents the area in the Northeast/Mid-Atlantic Bight that is closed in June but the number represents those fish caught in that area for the entire year; “Open” represents all other areas of the Atlantic Ocean fished by U.S.-flagged pelagic longline vessels. “Discarded” is both discarded dead and discarded alive. Tables 4 and 5 illustrate that, while annual landings of bluefin tuna from the closed area have been reduced, the number of bluefin tuna kept has not been reduced. These data indicate that the June closure has been effective at reducing bluefin discards while not significantly reducing bluefin tuna landings. This was expected as most of the interactions in the area did not previously result in landings anyway, due to the target catch requirements. Nevertheless, bluefin tuna discards continue and data suggest that the current target catch requirements result in unnecessary dead discards, while the quota allocated to account for these incidental catches remains unused.

4.0 Consequences of Alternatives Including the Preferred Alternatives

The impacts of each alternative identified in Section 2 are discussed separately in the following sections in the context of the relevant Magnuson-Stevens Act National Standards and the objectives of the HMS FMP, such as those regarding bycatch reduction and community impacts. The economic impacts of each alternative are briefly summarized in the following sections, and are described more fully in Section 5 (draft RIR).

The methods used to calculate the reduction in bluefin tuna discards under each alternative uses the average annual number of pelagic longline trips (for an area and/or time period from logbook data) multiplied by the frequency with which pelagic longline trips interact with bluefin tuna (from observer data), which is then multiplied by the percentage of such trips that land the

required target catch to retain a bluefin tuna (from weighout data). Using different target catch requirements provides a means of predicting different amounts of bluefin that might be landed for each target catch requirement. The difference in landings between any two alternatives is also the reduction or increase in discards for the two alternatives. These procedures are further described under the various alternatives, and the inputs into the calculations for each alternative are shown in Table 6. Longline bluefin tuna quotas under various alternatives are shown in Table 7. The bluefin tuna estimated to be landed under each alternative are shown in Table 8, and changes in revenues due to estimated changes in landings are shown in Table 9.

4.1. Approach One: Adjusting Target Catch Requirements for Bluefin Tuna Retention by Pelagic Longline Vessels

The following alternatives represent the range of options considered by NMFS regarding changing the target catch requirements for bluefin tuna retention by pelagic longline vessels. The alternatives range from no action (status quo) to adjusting the target catch requirements in one or all areas, including alternatives that would maintain similar target catch limits at all times throughout the year.

Each of the target catch alternatives is considered and analyzed under two circumstances. The first analysis maintains the current boundary line (34° N. latitude) and quota subdivision between the northern and southern areas. The second analysis adjusts the boundary line to 31° N. latitude, which would result in landings in South Carolina and Georgia being included in the northern area, and adjusts the quota subdivision as described in Section 4.2.2 (Approach Two, Preferred Alternative).

4.1.1 Alternative 1: No Action/Status Quo

The no action alternative would maintain the current HMS regulations that require that the weight of bluefin tuna landed by longline vessels north of 34° N. latitude be no more than two percent of the total weight of the other catch landed for a trip. South of 34° N. latitude, pelagic longline vessels are allowed one bluefin tuna per trip, provided that they land 1,500 lbs. of other catch on a trip from January through April, and 3,500 lbs. of other catch from May through December. As noted above, this alternative is being analyzed and considered under the existing 34° N. latitude boundary line, as well as under the alternative 31° N. latitude line that would add South Carolina and Georgia landings to the northern area. Under either boundary line, the no action alternative is not preferred because other alternatives could likely reduce dead discards consistent with the management needs discussed in Section 1.0.

Ecological Impacts

The ecological impacts of no action would be the continued negative impacts of discarding of bluefin tuna by longline vessels. For all of the target catch alternatives, including this no action alternative, this EA/RIR/IRFA estimates, on an annual basis, how many bluefin tuna could be kept

(landings) and the amount of dead discards that would occur. As set forth below, annual bluefin tuna landings are estimated using fishermen-reported data (how many trips and pounds of fish landed per trip) and information from NMFS' observer program (how frequently bluefin tuna are encountered on longline trips). The EA/RIR/IRFA provides information from pelagic logbook reports on the number of bluefin tuna caught each year, and, just as with the landings, also estimates catches using fishermen-reported data and information from NMFS' observer program. Dead discards then are estimated by subtracting the number of bluefin tuna landings from the number of bluefin catches.

For the no action/status quo alternative, annual bluefin landings are evaluated using both estimates from fishermen-reported and observer data, as well as actual landings in 2000 obtained through the bluefin tuna dealer reporting program. Assuming that, in the northern area, about 10,000 lbs. of target catch are required to be able to legally land a bluefin tuna on a trip, about 20 percent of the pelagic longline trips in the northern area landed enough target catch to land a bluefin tuna during 1998-2000. According to observer data from the same time period, about 20.2 percent of observed longline trips caught a bluefin. Multiplying the average annual number of pelagic longline trips landing in the northern area during this time period (655) by the percent of trips that had enough target catch to land a bluefin tuna (20.0 percent), then multiplying this result by the percent of observed trips that actually encountered a bluefin tuna over the same time period (20.2 percent), results in an estimated 26 trips that would legally land one bluefin tuna under the no action/status quo alternative. However, some trips may land more than one bluefin tuna in the northern area under the status quo. Multiplying the total number of trips by the percentage of trips that landed 20,000 lbs. of target catch (5.9 %) and the percentage of observed trips that caught at least two bluefin tuna (13.6 %) provides an estimate of five trips during which vessels would land two bluefin tuna. The first bluefin tuna that these trips landed is already counted in the 26 trips that would land one bluefin tuna, thus the total number of bluefin tuna landed is 31 (26 + 5). Applying the same analysis to those vessels that would have enough target catch to land three bluefin tuna (30,000 lbs. of other landings) results in an estimated two trips that would land three bluefin tuna. Few vessels in the current fleet are large enough to land more than 30,000 lbs. per trip. Thus, the total number of estimated, annual bluefin tuna landings is 33. Using the average round weight of bluefin tuna landed by pelagic longline vessels in the northern area in 2000 of 456 lbs., 33 fish is equivalent to 6.8 mt.

This estimated number of bluefin tuna landed in the northern area, under the status quo, is less than the average that was actually landed during 1998-2000, which was about 90 bluefin tuna per year. As described in Section 4, over the last several years, many vessels landed bluefin tuna without meeting the minimum target catch requirement. After NMFS sent a letter to longline vessels in May 2000 reminding them of the regulations, compliance improved and the number of bluefin tuna landed in the northern area dropped to 56 (11.6 mt) in 2000.

For the southern area, pelagic longline landings of bluefin tuna during 1999-2000 correspond exactly with those estimated using the target catch/observer data methodology described above (because observed data are the basis of extrapolated landings estimates and

assume 100 percent compliance) (see Table 8). Pelagic longline landings in the southern area totaled 211 bluefin tuna a year in both 1999 and 2000, and the target catch/observer data approach also estimates 211 bluefin tuna landings in the southern area. Using the average round weight of bluefin tuna landed by pelagic longline vessels in the southern area in 2000 of 537 lbs., 211 fish are equivalent to 51.4 mt. Removing South Carolina and Georgia from the southern area, under the alternative 31° N. latitude boundary line, results in 209 actual fish (50.9 mt) landed, or an estimated 194 fish (47.3 mt) landed using the target catch/observer data methodology, in the southern area.

Catches of bluefin tuna (both kept and discarded), as reported in pelagic logbook reports, average 1,118 fish per year from 1998-2000 (see Table 5). Comparing catches before and after the time/area closure in the Mid-Atlantic Bight was implemented, catches of bluefin tuna dropped from 1,541 in 1998 to 963 in 2000 (the closure was implemented mid year in 1999). Just as with landings, bluefin tuna catches also can be estimated by multiplying the total number of pelagic longline trips by the percentage of trips observed that caught bluefin tuna. Under this estimation methodology, in the northern area, with an annual average of 655 trips, and using the percentage of trips in which one, two, and three bluefin tuna were caught (from observer data, as in the calculations above), an estimated 277 bluefin tuna would be caught each year (See Table 6). In the southern area, with an annual average of 1,817 longline trips per year, 770 bluefin tuna would be caught each year (calculated using the same methodology). Thus, there would be an estimated total of 1,047 (277 + 770) bluefin tuna caught on average each year from 1998-2000. Including landings from South Carolina and Georgia in the northern area, the estimated 1,047 bluefin tuna caught would not change, but the distribution of bluefin tuna caught would change to 347 in the northern area and 701 in the southern area. Because this estimation methodology and the 1998-2000 data are also applied to landings, the EA/RIR/IRFA uses 1,047 as the estimated number of bluefin caught each year as a baseline for evaluating the alternatives relative to the objectives.

Subtracting the number of landings from the number of catches results in an estimated 803 bluefin tuna discarded coastwide, 244 in the northern area and 559 in the southern area. Under the alternative to re-align northern and southern areas, the no action alternative would result in 819 bluefin tuna discarded, 312 in the northern area and 507 in the southern area. Generally speaking, pelagic logbook reports from 1998-2000 indicate that about 40 percent of the bluefin tuna discarded are discarded dead. Using this percentage estimate, this alternative would result in 321 bluefin tuna discarded dead under the current 34° N. latitude boundary line, and 328 bluefin tuna discarded dead under the alternative north/south division at 31° N. latitude. Reports from NMFS observers on pelagic longline vessels, however, indicate that approximately 70 percent of the bluefin tuna discarded are discarded dead (approximately 75 percent in the southern area, and 67 percent in the northern area). Using the percentage dead estimate from observer data, the no action alternative would result in 526 bluefin tuna discarded dead under the current boundary line, and 573 bluefin tuna discarded dead under the alternative 31° N. latitude boundary line. The increased estimate of dead discards under the alternative boundary line alternative can be attributed to an expanded application of the current (more restrictive) target catch requirements to a larger area and higher percentage of landings. The preferred alternative on target catch

requirements, in combination with the preferred alternatives on moving the boundary line and inseason adjustment authority, would ensure that any increase in dead discards, should that occur, can be addressed on a real-time basis.

Social and Economic Impacts

The no action/status quo alternative would maintain a system under which much of the bluefin tuna caught by pelagic longline vessels must be discarded. The fish that are discarded dead are accounted for through a data collection process and counted towards the U.S. dead discard allowance. However, the fish are not landed and sold, thus there is no economic benefit derived from the bluefin dead discards. As the pelagic longline industry has come under increased scrutiny in recent years, several regulatory requirements have affected vessels' profitability. These included several time/area closures designed to reduce the bycatch of billfish, bluefin tuna, sea turtles, and undersize swordfish. These closures may make it more difficult for vessels to catch the amount of target catch currently required to retain a bluefin tuna because vessels had fished these areas presumably due to higher catch rates and/or lower costs.

Pelagic longline vessels operate out of several ports on the coasts of the west Atlantic and Gulf of Mexico that depend on the fishing industry. These ports include Barnegat Light, NJ, Fairhaven/New Bedford, MA, and Venice, LA. Information on these communities and their relationship to the fisheries for Atlantic HMS is provided in Chapter 9 of the HMS FMP. Maintaining the current target catch requirements, which result in the discarding of a significant number of dead bluefin tuna by pelagic longline vessels, continues to hurt the economic viability of a pelagic longline industry already experiencing economic difficulties due to regulatory constraints instituted to address other overfishing and bycatch problems.

Conclusion

For the reasons explained in the above discussion of the ecological, social, and economic consequences of the no action/status quo alternative, as well as in Sections 1 and 4 of this EA/RIR/IRFA, maintaining the status quo is not optimal with respect to the objectives of the HMS FMP, its objectives, the Magnuson-Stevens Act, and the National Standard Guidelines.

4.1.2 Alternative 2: Adjust Target Catch Requirements in Northern Area from Two Percent to 3,500 lbs. of Other Catch to Retain One Bluefin Tuna

This alternative would adjust the current target catch requirements (large medium and giant bluefin tuna may not exceed two percent by weight of all other fish species retained) to allow pelagic longline vessels landing north of 34° N. latitude to land one bluefin tuna per trip, provided they also land 3,500 lbs. of other catch from the same trip. This alternative would not modify the target catch requirements south of 34° N. latitude. As with the no action/status quo alternative, this alternative is considered and analyzed under the existing 34° N. latitude boundary

line and alternative 31° N. latitude line described in Section 4.2.2 (Approach 2, Preferred Alternative).

Ecological Impacts

This alternative would allow longline vessels that land their catch in the northern area to retain a bluefin tuna on more trips, as the median landings of pelagic longline trips in the northern area have been about 3,700 lbs. for the years 1998-2000. According to the 1998-2000 weighout data, under the existing 34° N. latitude boundary line, 54.1 percent of pelagic longline trips that landed in the northern area landed 3,500 lbs. or more of catch other than bluefin tuna. This compares to about 20 percent of trips that landed 10,000 lbs. or more, which is what would likely be the minimum target catch that would allow a vessel to land a bluefin tuna under the current regulations. Thus, this alternative would likely increase the amount of bluefin tuna that could be landed by longline vessels in the northern area, consequently, decreasing their discards and having a positive impact on the western Atlantic bluefin tuna stock by reducing overall mortality.

Applying the estimation methodologies discussed in the no action/status quo alternative, this alternative would result in the discarding of 205 bluefin tuna in the northern area, a decrease of 16 percent from the status quo, and would result in longline landings of about 72 bluefin tuna in the northern area. Coastwide, this alternative would result in the discarding of 764 bluefin tuna, a decrease of 4.9 percent from the status quo, and would result in longline landings of about 283 bluefin tuna coastwide. Assuming 40 percent of discards are dead (percentage estimate from logbook reports), this alternative would result in 82 and 302 bluefin tuna discarded dead in the northern area and coastwide, respectively. Assuming that 70 percent of discards coastwide, or 67 percent in the northern area, are dead (percentage estimate from observer reports), this alternative would result in 137 and 535 bluefin tuna discarded dead in the northern area and coastwide, respectively. As this alternative would only modify the target catch requirements in the northern area, it would not change the amount of bluefin tuna landed or discarded by pelagic longline vessels in the southern area.

The landings estimate for this alternative was calculated by multiplying the average annual number of pelagic longline trips landing in the northern area during this time period (655) by the percent of trips that had enough target catch to land a bluefin tuna (54.1 percent), then multiplying the result by the percent of observed trips that actually encountered a bluefin tuna over the same time period (20.2 percent), thus producing an estimated 72 trips that would legally land one bluefin tuna, or 72 bluefin tuna landed in the northern area. Using the average round weight of bluefin tuna landed by pelagic longline vessels in the northern area in 2000 of 456 lbs., 72 fish is equivalent to 14.9 mt. Discard estimates were calculated, as described in the no action/status quo alternative, by subtracting the number of fish that could be landed from the number of fish that are estimated to be caught.

As noted above, this alternative would likely increase the amount of bluefin tuna that could be landed by longline vessels in the northern area, thus decreasing their discards. It is

possible that this alternative could increase bluefin discards on longer pelagic longline trips where more fish is landed since it effectively would allow only one bluefin tuna per trip. Current regulations have no maximum retention limit. For example, if a vessel landed 40,000 lbs. of other fish on a trip, it could also land 800 lbs. of bluefin tuna, which could consist of one large fish or two or even three smaller fish. However, such an impact would likely be small. From 1998-2000, only eight pelagic longline trips – out of a total of about 8,000 total trips with only about 645 landing a bluefin tuna – reported landing two or more bluefin tuna (seven trips had two bluefin tuna, one had three). Nonetheless, this alternative would not allow longline vessels to land two bluefin in any event. Observer data from 1998-2000 indicate that while 58 percent of those pelagic longline trips that catch bluefin tuna catch two or less, only 33 percent caught only one (see Figure 4). Thus, this alternative would require over half of those trips that catch bluefin tuna to discard bluefin tuna, no matter how much target catch was landed. In addition, this alternative would not alter the target catch requirements in the southern area, where dead discards of bluefin tuna have increased over the last two years (see Table 2).

Modifying the target catch requirements for bluefin tuna retention could increase the incentive for longline vessels in the northern area to direct fishing effort on bluefin tuna. This is unlikely to occur under this alternative, however, as 3,500 lbs. of target catch is a significant amount of landings, and it is doubtful that a trip with that amount of other landings would not be a legitimate longline trip. Also, NMFS has received public comment that bluefin tuna are avoided, or at least not desired to be encountered in significant numbers, by pelagic longline vessels, because if multiple bluefin tuna are hooked on a set and die they can cause the gear to sink and be lost. Thus, NMFS would not anticipate any increase in overall fishing effort under this alternative.

Social and Economic Impacts

As mentioned above, trip level landings data for 1998-2000 indicate that this alternative would allow about 54.1 percent of pelagic longline trips in the northern area (about 50.9 percent if Georgia and South Carolina were included in the northern area) to land a bluefin tuna (i.e., had 3,500 lbs. of other landings). Meeting the target catch requirements does not mean that a vessel will catch a bluefin tuna that it can land, but this alternative would allow more of those that incidentally catch bluefin tuna to land the fish.

This alternative would positively affect revenues in the pelagic longline fishery. As described in the RIR, this alternative would increase the landings and gross revenues from bluefin tuna for pelagic longline vessels landing in the northern area by 28.4 percent, or by 44.1 percent if the north/south division line and subquota allocations were adjusted as described in Section 5.2.2 (Approach Two, Preferred Alternative). For the Longline category as a whole, this alternative would increase landings and gross revenues from bluefin tuna by 5.4 percent, or by 3.1 percent under the division line and subquota allocations from the Approach Two preferred alternative.

Conclusion

This alternative is not preferred at this time. As mentioned above, it does not alter the target catch requirements in the southern area, where dead discards of bluefin tuna have increased over the last two years. In addition, the majority of trips that do catch a bluefin tuna catch more than one, and this alternative would still result in many bluefin tuna caught by pelagic longline being discarded.

4.1.3 Alternative 3: Adjust Target Catch Requirements in Northern Area to 3,500 lbs. of Other Catch to Retain One Bluefin Tuna, and 6,000 lbs. of Other Catch to Retain Two Bluefin Tuna

This alternative would adjust the target catch requirements to allow pelagic longline vessels landing north of 34° N. latitude to land one bluefin tuna per trip, provided they also land 3,500 lbs. of other catch from the same trip, or two bluefin tuna per trip, provided they also land 6,000 lbs. of other catch from the same trip. This alternative would not modify the target catch requirements south of 34° N. latitude. As with the no action/status quo alternative, this alternative is considered and analyzed under the existing 34° N. latitude boundary line and alternative 31° N. latitude line described in Section 4.2.2 (Approach 2, Preferred Alternative).

Ecological Impacts

Similar to Alternative 2, this alternative would allow longline vessels that land their catch in the northern area to retain a bluefin tuna on more of their trips, as the median landings of pelagic longline trips in the northern area has been about 3,700 lbs. for the years 1998-2000. About 34.7 percent of trips in the northern area landed 6,000 lbs. or more over that same time period (about 30.0 percent if Georgia and South Carolina were included in the northern area). This compares to about 5 percent of trips that landed 20,000 lbs. or more, which is what would likely be the minimum target catch that would allow a vessel to land two bluefin tuna under the current regulations. Thus, this alternative would likely increase the amount of bluefin tuna that could be landed by longline vessels in the northern area, consequently, decreasing their discards and having a positive impact on the western Atlantic bluefin tuna stock by reducing overall mortality.

Applying the estimation methodologies discussed in the no action/status quo alternative, this alternative would result in the discarding of 174 bluefin tuna in the northern area, a decrease of 28.6 percent from the status quo, and would result in longline landings of about 103 bluefin tuna (21.3 mt) in the northern area. Coastwide, this alternative would result in the discarding of 733 bluefin tuna, a decrease of 8.7 percent from the status quo, and would result in longline landings of about 314 bluefin tuna coastwide. Including landings in South Carolina and Georgia in the northern area results in landings of an estimated 118 bluefin tuna in the northern area, equivalent to 24.4 mt, and coastwide discards of 735 bluefin tuna, a decrease in coastwide discards of 8.5 percent. Using the estimates of 40 percent and 70 percent mortality for discards

(from logbook and observer reports respectively), this alternative would result in a range of 293 and 515 bluefin tuna discarded dead coastwide, depending on the mortality estimate used.

Similar to Alternative 2, this alternative would not alter the target catch requirements in the southern area, where dead discards of bluefin tuna have increased over the last two years (see Table 2), and thus would not change the amount of bluefin tuna landed or discarded by pelagic longline vessels in the southern area. By modifying the target catch requirements, this alternative possibly may increase the incentive for longline vessels in the northern area to direct fishing effort on bluefin tuna. However, as with Alternative 2, this is unlikely to occur under this alternative, because 3,500 lbs. of target catch is a significant amount of landings, and it is doubtful that a trip with that amount of other landings would be a trip targeting bluefin tuna. Moreover, for the reasons discussed under Alternative 2, NMFS would not anticipate any increase in overall fishing effort under this alternative.

Social and Economic Impacts

This alternative would have a positive impact on revenues in the pelagic longline fishery. As described in the RIR, this alternative would increase the landings and gross revenues from bluefin tuna for pelagic longline vessels landing in the north by 83.6 percent, or by 102 percent if the north/south division line and subquota allocations were adjusted as described in Section 5.2.2 (Approach Two, Preferred Alternative). For the Longline category as a whole, this alternative would increase landings and gross revenues from bluefin tuna by 16 percent, or by 14.6 percent under the division line and subquota allocations from the Approach Two preferred alternative.

Conclusion

This alternative is not preferred at this time. While it does address the fact that most longline trips that catch bluefin tuna catch more than one, it does not alter the target catch requirements in the southern area, where dead discards of bluefin tuna have increased over the last two years.

4.1.4 Alternative 4: Adjust Coastwide Target Catch Requirements to 3,500 lbs. of Other Catch to Retain One Bluefin Tuna, and 6,000 lbs. of Other Catch to Retain Two Bluefin Tuna, with Southern Area Allowed One Bluefin Tuna with only 1,500 lbs. from January through April

This alternative would adjust the target catch requirements to allow pelagic longline vessels in all areas to land one bluefin tuna per trip, provided they also land 3,500 lbs. of other catch from the same trip, or two bluefin tuna per trip, provided they also land 6,000 lbs. of other catch from the same trip. However, from January through April, this alternative would allow pelagic longline vessels landing south of 34° N. latitude to land their one bluefin tuna per trip with only 1,500 lbs. of other fish. As with the no action/status quo alternative, this alternative is

considered and analyzed under the existing 34° N. latitude boundary line and alternative 31° N. latitude line described in Section 4.2.2 (Issue 2, Preferred Alternative).

Ecological Impacts

Similar to Alternatives 2 and 3, this alternative would allow longline vessels that land their catch in the northern area to retain a bluefin tuna on more trips. In the northern area, this alternative is identical to Alternative 3. In the southern area, this alternative differs from the no action/status quo alternative only in that it would allow pelagic longline trips to land two bluefin tuna if they have 6,000 lbs. of other landings. Thus, this alternative would likely decrease bluefin tuna discards and have a positive impact on the western Atlantic bluefin stock by reducing overall mortality.

The ecological impacts of this alternative would be identical to Alternative 3 for the northern area, but this alternative would also reduce discards and increase landings in the southern area. Applying the estimation methodologies discussed in the no action/status quo alternative, in the southern area, this alternative would result in the discarding of 494 bluefin tuna in the southern area, a decrease of 11.6 percent from the status quo, and would result in landings of about 276 bluefin tuna (67.5 mt). Coastwide, this alternative would result in the discarding of 668 bluefin tuna, a decrease of 16.8 percent from the status quo, and would result in longline landings of about 379 bluefin tuna (88.8 mt). Including landings in South Carolina and Georgia in the northern area results in landings of an estimated 374 bluefin tuna coastwide, equivalent to 86.8 mt, and coastwide discards of 673 bluefin tuna, a decrease in coastwide discards of 16.2 percent. Using the estimates of 40 percent and 70 percent mortality for discards (from logbook and observer reports respectively), this alternative would result in a range of 267 and 471 bluefin tuna discarded dead coastwide, depending on the mortality estimate used.

This alternative would address the target catch requirements in both the northern and southern areas, and would address the fact that most longline trips that catch bluefin tuna catch more than one. Similar to the other alternatives that modify the target catch requirements, this alternative possibly could increase the incentive for longline vessels to direct fishing effort on bluefin tuna. However, as with the other alternatives, targeting bluefin tuna is unlikely to occur and no increase in overall fishing effort is anticipated under this alternative. Where this alternative differs from Alternative 3 is in the southern area, where it would not modify the minimum catch needed to retain one bluefin tuna, but only would allow vessels to retain two if they have 6,000 lbs. of target catch. The allowance for two fish in the southern area should not result in targeting of bluefin, as 6,000 lbs. of required target catch should ensure that a trip is not directed at bluefin tuna.

Social and Economic Impacts

This alternative would positively impact revenues in the pelagic longline fishery. As described in the RIR, this alternative would increase the landings and gross revenues from bluefin tuna for pelagic longline vessels coastwide by 41.3 percent, or by 38.4 percent if the north/south division line and subquota allocations were adjusted as described in Section 4.2.2 (Approach Two, Preferred Alternative).

Conclusion

This alternative is not preferred at this time. While this alternative addresses the fact that most longline trips that catch bluefin tuna catch more than one, and provides an allowance for pelagic longline vessels fishing in the southern area to land two bluefin tuna, this alternative still maintains a differential target catch requirements between the northern and southern area. This differential no longer seems to be warranted as the distribution of effort of the fleet, target catch rates, and bluefin tuna interaction rates have changed relative to the mid 1990s, trip level longline landings are similar in both the northern and southern areas, and the seasonal variation in the southern area no longer exists to the degree it did in the past (see Tables 3a through 3d).

4.1.5 Alternative 5: Adjust Coastwide Target Catch Requirements to 2,000 lbs. of Other Catch to Retain One Bluefin Tuna, and 6,000 lbs. of Other Catch to Retain Two Bluefin Tuna (Preferred Alternative)

This alternative would adjust the target catch requirements to allow pelagic longline vessel in all areas to land one bluefin tuna per trip, provided they also land 2,000 lbs. of other catch from the same trip, or two bluefin tuna per trip, provided they also land 6,000 lbs. of other catch from the same trip. As with the no action/status quo alternative, this alternative is considered and analyzed under the existing 34° N. latitude boundary line and alternative 31° N. latitude line described in Section 4.2.2 (Approach 2, Preferred Alternative).

Ecological Impacts

This alternative differs from Alternative 4 in that it would lower the minimum target catch levels to retain one bluefin tuna, in all areas and at all times, to 2,000 lbs. Under the existing 34° N. latitude boundary line, in the northern area, 79.6 percent of pelagic longline trips landed 1,500 lbs. of target catch each year between 1998-2000. In the southern area, 71.8 percent of pelagic longline trips landed 1,500 lbs. of target catch annually during the same time period.

Applying the estimation methodologies discussed in the no action/status quo alternative, under the existing 34° N. latitude boundary line, this alternative would result in the discard of 150 bluefin tuna in the northern area, a decrease of 38.5 percent from the status quo, and would result in longline landings of about 127 bluefin tuna (26.3 mt). In the southern area, this alternative would result in the discarding of 464 bluefin tuna, a decrease of 17.0 percent from the status quo, and would result in longline landings of about 306 bluefin tuna (74.5 mt). Coastwide, this alternative would result in the discarding of 614 bluefin tuna, a decrease of 23.5 percent from the

status quo, and would result in landings of about 433 bluefin tuna (100.8 mt). Including Georgia and South Carolina in the northern area, under the alternative 31° N. latitude boundary line, would not change estimated landings and discards coastwide, because this alternative would impose identical target catch requirements in both areas. Using 40 and 70 percent mortality estimates for discards (from logbook and observer reports respectively), this alternative would result in a range of 246 and 430 bluefin tuna discarded dead coastwide, depending on the mortality estimate used. This alternative would reduce dead discards of bluefin tuna and have a positive impact in the western Atlantic bluefin tuna stock by reducing overall mortality.

This alternative would allow longline vessels landing their catch in any area to retain bluefin tuna on more trips, and would generally allow them to retain more bluefin tuna on most trips. The amount of bluefin tuna landed would approach the overall current quota levels of the Longline category (about 110 mt), but would not exceed it. This alternative would address the target catch requirements in both the northern and southern areas, and would address the fact that most longline trips that catch bluefin tuna catch more than one. Similar to the other alternatives that modify the target catch requirements, this alternative may possibly increase the incentive for longline vessels to direct fishing effort on bluefin tuna. However, for similar reasons as those discussed in the above alternatives, targeting bluefin tuna is unlikely to occur and no increase in overall fishing effort is anticipated.

Social and Economic Impacts

This alternative would positively affect revenues in the pelagic longline fishery. As described in the RIR, this alternative would increase the landings and gross revenues from bluefin tuna for pelagic longline vessels coastwide by approximately 61 percent.

In addition, this alternative is the among simplest of those considered (similar to Alternative 6), in that the target catch requirements would not vary by region or during the year. Uniformity in the target catch requirements should make the regulations easier to understand and enforce, and may improve compliance with the regulations.

Conclusion

This alternative is preferred. While it still requires vessels to land a sufficient amount of target catch to ensure that vessels do not target bluefin tuna, at the same time, it addresses the fact that most longline trips that catch bluefin tuna catch more than one, provides an allowance for pelagic longline vessels fishing in the southern area to land two bluefin tuna, and should reduce the amount of regulatory discards of bluefin tuna in all areas. This alternative also eliminates the differential target catch requirements between the northern and southern areas, which no longer seem warranted. Trip level longline landings are similar in both the northern and southern areas, and the seasonal variation in the south no longer exists to the degree it did in the past (see Tables 3a through 3d). This alternative furthers the goals and objectives of the HMS FMP and is consistent with the Magnuson-Stevens Act and the National Standard Guidelines.

4.1.6 Alternative 6: Adjust Coastwide Target Catch Requirements to 1,500 lbs. of Other Catch to Retain One Bluefin Tuna, and 6,000 lbs. of Other Catch to Retain Two Bluefin Tuna

This alternative would adjust the target catch requirements to allow pelagic longline vessel in all areas to land one bluefin tuna per trip, provided they also land 1,500 lbs. of other catch from the same trip, or two bluefin tuna per trip, provided they also land 6,000 lbs. of other catch from the same trip. As with the no action/status quo alternative, this alternative is considered and analyzed under the existing 34° boundary line and alternative 31° line described in Section 4.2.2 (Approach 2, Preferred Alternative).

Ecological Impacts

This alternative is similar to Alternative 5 in that it would establish a coastwide minimum target catch requirement to retain bluefin tuna, but differs from Alternative 5 in that it would lower the minimum target catch requirement to retain one bluefin tuna to 1,500 lbs. In the northern area, about 79 percent of pelagic longline trips landed 1,500 lbs. of target catch during 1998-2000. In the southern area, year round, about 72 percent of pelagic longline trips landed 1,500 lbs. of target catch during the same time period.

Applying the estimation methodologies discussed in the no action/status quo alternative, this alternative would result in the discarding of 141 bluefin tuna in the northern area, a decrease of 42.4 percent from the status quo, and would result in longline landings of about 136 bluefin tuna (28.1 mt). In the southern area, this alternative would result in the discarding of 441 bluefin tuna, a decrease of 21.1 percent from the status quo, and would result in longline landings of about 329 bluefin tuna (80.1 mt). Coastwide, this alternative would result in the discarding of 582 bluefin tuna, a decrease of 27.5 percent from the status quo, and would result in landings of about 465 bluefin tuna (108.2 mt). Including Georgia and South Carolina in the northern area, under the alternative 31° N. latitude boundary line, would not change estimated landings and discards coastwide, because this alternative would impose identical target catch requirements in both areas. Using 40 and 70 percent mortality estimates for discards (from logbook and observer reports respectively), this alternative would result in a range of 233 and 407 bluefin tuna discarded dead coastwide, depending on the mortality estimate used. This alternative would reduce dead discards of bluefin tuna and have a positive impact in the western Atlantic bluefin tuna stock by reducing overall mortality.

This alternative would allow longline vessels that land their catch in all areas to retain bluefin tuna on more of their trips, and would generally allow them to retain more bluefin tuna on most trips. The amount of bluefin tuna landed would approach the overall current quota levels of the Longline category (about 110 mt). This alternative would address the target catch requirements in both the northern and southern areas, and would address the fact that most longline trips that catch bluefin tuna catch more than one. This alternative would modify the target catch requirements more than other alternatives considered. As with the other alternatives

that modify the target catch requirements, this alternative possibly could increase the incentive for longline vessels in the northern area to direct fishing effort on bluefin tuna. While such a result may be unlikely, if it were to occur, bluefin tuna landings by pelagic longline vessels could exceed the Longline category quota and a subsequent closure could result in increased discards.

Social and Economic Impacts

This alternative would positively impact revenues in the pelagic longline fishery. As described in the RIR, this alternative would increase the landings and gross revenues from bluefin tuna for pelagic longline vessels coastwide by approximately 72 percent.

Similar to Alternative 5, this alternative is less complex than other alternatives considered, in that the target catch requirements would not vary by region or during the year. Uniformity in the target catch requirements would make them more easily understood, and could make the regulations easier to enforce. However, enforcing a prohibition of targeting bluefin tuna with longline gear is difficult, and if targeting were to occur as a result of this alternative, it would make the pelagic longline regulations prohibiting bluefin tuna targeting and retention more difficult to enforce.

Conclusion

This alternative is not preferred at this time. While it does address the target catch requirements in all areas, it may modify them to a level at which the Longline category could land more than its quota. If the Longline category exceeded its quota, a closure would likely increase discards of bluefin tuna, contrary to the objective of reducing discards.

4.2 Approach 2: Moving the North/South Division and Reallocating Quota between Areas

NMFS considered three alternatives regarding the north/south boundary line and reallocation of the Longline category bluefin tuna quota. The purpose of moving the north/south boundary would be to find a division line that better reflects the seasonal and other differences in the northern and southern fisheries, consistent with the objectives of reducing discards and preventing directed fishing while allowing landings of incidental bluefin tuna catches. For example, seasonal differences in bluefin tuna migration patterns between northern feeding migrations and southern spawning migrations affect fishing interaction rates and the condition of the fish in terms of fat content and ability to survive the capture experience. Any division line should account for such seasonal differences in the fisheries and correspond with interaction rates to ensure that catches are incidental and do not result in excess discards. In addition, any division line should not be near an area where fish are usually landed, i.e., it should be clear that fish caught in a particular area will be landed in that area. Reallocating the quota between the two

zones would be necessary to adjust for any increase/decrease in the size of each zone based on the location of the division line. The three alternatives considered are discussed below.

4.2.1 Alternative 1: No Adjustment in Longline Category North/South Division Line or Subquotas (No Action/Status Quo)

This alternative would maintain the status quo, with the North/South division line at 34° N. latitude, and the quota allocation between the two areas at 78.9 percent for the southern area and 21.1 percent for the northern area.

Ecological, Social, and Economic Impacts

The no action alternative would not have direct ecological impacts because it is not expected to change fishing current fishing effort or practices. Maintaining a boundary line would ensure that any seasonal variations in catch rates or fishing practices in one fishing area would not consume all the incidental longline quota, thereby causing a closure and subsequent discards in the other area. However, the current boundary line and quota allocation do have social and economic impacts. Because the current boundary line is in an area where there is longline activity, there has been confusion among fishermen and tuna buyers as to whether vessels are fishing under the regulations/quota for the northern area or the southern area. NMFS has received public comment on several occasions over the last several years that the current position of the division line between the northern and southern areas (34° N. latitude) is unfair, especially for those vessels that land just north of the line where regulations require more target catch, and does not meet the objective of reducing discards and rebuilding overfished bluefin tuna.

Conclusion

The no action/status quo alternative is not preferred at this time because the current Longline category boundary line is in an area with longline activity, and has caused confusion regarding the applicability of the northern or southern regulations/quotas.

4.2.2 Alternative 2: Move North/South Division Line to 31°00' N. latitude, and Change Subquota Allocation to 70/30 Percent for the Southern/Northern Areas (Preferred Alternative)

This alternative would move the Longline category North/South division line to 31°00' N. latitude near Jekyll Island, Georgia, and adjust the Longline category subquotas to allocate 70 percent to the southern area and 30 percent to the northern area.

Ecological, Social, and Economic Impacts

This alternative does not have direct ecological impacts, because it is not expected to change current fishing effort or practices. As with the no action/status quo alternative, maintaining a boundary line would ensure that any seasonal variations in catch rates or fishing practices in one fishing area would not consume all the incidental longline quota, thereby causing a closure and subsequent discards in the other area. This alternative would have positive social and economic impacts. As mentioned above, NMFS has received public comment on several occasions that the current position of the division line between the northern and southern areas (34° N. latitude) causes confusion, is unfair (especially for those vessels that land just north of the line where regulations require more target catch), and does not meet objectives of reducing discards and rebuilding overfished bluefin tuna. To minimize potential confusion among fishermen and tuna dealers, a boundary line should be in an area of little longline activity. This 31°00' N. latitude boundary line alternative would achieve this goal, as there have been very few landings of bluefin tuna in Georgia. This alternative would slightly adjust the quota subdivision to reflect the additional landings likely to be applied to the northern area.

Conclusion

This is the preferred alternative. This alternative would maintain a boundary line between the northern and southern areas to prevent one area from consuming all the incidental longline quota, but would move the boundary line to an area with little longline fishing activity nearby, and would adjust the longline quota subdivision to reflect the change in areas. This alternative furthers the goals and objectives of this rulemaking and the HMS FMP, and is consistent with the Magnuson-Stevens Act and the National Standard Guidelines.

4.2.3 Alternative 3: Eliminate North/South Division Line and Establish One Longline Category Quota for All Areas

This alternative would eliminate the Longline category North/South division line and subquotas and would establish a single Longline category quota applicable to all areas.

Ecological, Social, and Economic Impacts

This alternative could have negative ecological impacts if seasonal variations in one fishing area led to high bluefin tuna catch rates and all the incidental longline quota was landed in that area, thereby causing a closure with subsequent discards in the other area. The social and economic impacts of this alternative could also be negative if a closure occurred and fishermen were unable to land any incidentally caught bluefin tuna. While bluefin tuna landings constitute a small percentage of the gross revenues of pelagic longline fishery as a whole, the revenues to those individual fishing operations that are able to land bluefin tuna can be substantial. The inability to land any bluefin tuna should not incur any costs (because bluefin tuna are an incidentally caught species) but the loss of potential revenues would be wasteful and may increase incentive to circumvent regulations.

Conclusion

This alternative is not preferred at this time. This alternative could result in a Longline category closure with associated increased discards and loss of potential social and economic benefits of truly incidentally caught bluefin tuna.

4.3 Approach Three: Inseason Adjustment Authority for Target Catch Requirements

This section evaluates the three alternatives that NMFS considered regarding inseason authority to adjust the bluefin tuna retention limits for longline vessels.

The purpose of providing NMFS inseason adjustment authority for bluefin tuna retention by longline vessels would be to increase the likelihood of meeting the management objectives for the bluefin tuna fishery on an inseason basis. Pelagic longline fishery interaction rates with bluefin tuna vary over relatively short time frames (within a season) as well as over longer time frames (across years or decades). Notice and comment rulemaking, which NMFS has undertaken numerous times (see Section 1), is a lengthy process and cannot address excess discards on a real-time basis. Without inseason adjustment authority, if landings rates were high and the available data indicated that a quota or subquota would be met before the end of the fishing year, NMFS could not modify the bluefin tuna limit for longline trips within a season and the available quota may be exceeded. Conversely, if landings rates were low, without inseason adjustment authority, NMFS could not modify bluefin tuna retention limits to allow more retention of incidental catches. Inseason adjustment authority would allow NMFS to respond to variations in catch rates in real time, reduce the risk of exceeding available quota, and meet the objectives of reducing discards and allowing retention of incidentally caught bluefin tuna.

4.3.1 Alternative 1: No Inseason Adjustment Authority (No Action/Status Quo)

This no action/status quo alternative would maintain current regulations under which NMFS has no inseason authority to adjust the amount of bluefin tuna that could be retained by longline vessels on a trip. Limits and target catch requirements are fixed in the regulations, and NMFS could only close the fishery if the bluefin tuna Longline quota (or area subquota) was reached.

Ecological Impacts

This alternative would likely have minimal ecological impacts, as the retention of bluefin tuna by longline vessels would be controlled by target catch requirements and quotas. However, this alternative could have negative ecological impacts if, for example, NMFS adopted the preferred alternative under Approach One to modify the target catch requirements and landings of bluefin tuna by longline vessels were greater than expected. Under current regulations, NMFS could not close the fishery until the quota or subquota were met, and after a closure, discard

mortality would continue. Thus, not having the inseason authority to modify bluefin tuna retention by longline vessels could result in excessive catches in a particular area (e.g., the Gulf of Mexico), which could have negative ecological impacts.

Social and Economic Impacts

This alternative would limit NMFS' ability to prevent bluefin tuna Longline quota from being landed in a short period of time, which could result in a closure of the longline fishery for the remainder of the fishing year. A closure could have negative impacts on vessels that would usually be able to retain a certain amount of incidentally caught bluefin tuna.

Conclusion

This alternative is not preferred at this time. It does not provide NMFS with the ability to modify bluefin tuna retention limits by longline vessels in order to slow or increase catch rates, which could have negative ecological, social, and economic impacts.

4.3.2 Alternative 2: Provide NMFS with Inseason Adjustment Authority to Adjust the Bluefin Tuna Retention Limits by Number of Fish Only

This alternative would provide NMFS with inseason authority to adjust the bluefin tuna retention limits for pelagic longline vessels from a range of zero to three fish per trip. NMFS would be able to adjust the limits through an inseason action, with 21 days public notice. This authority would be similar to the inseason authority NMFS has to adjust the General category bluefin tuna daily retention limit from zero to three bluefin tuna per vessel. This alternative would not provide NMFS the inseason authority to adjust the minimum target catch requirements for bluefin tuna retention (e.g., 3,500 lbs. to 3,000 lbs.).

Ecological Impacts

The ecological impacts of this alternative would be minimal, in that overall mortality of bluefin tuna is controlled by quotas. This alternative could reduce mortality, however, if inseason authority were used to slow landings so that the longline quota were not closed and all incidentally caught bluefin tuna would have to be discarded.

Social and Economic Impacts

This alternative could prevent NMFS from having to completely eliminate retention of bluefin tuna by longline vessels, and thus could prevent negative impacts. If this inseason authority were not available, NMFS could not stop longline vessels in a particular area from landing the entire quota or subquota during a short period of time, which would not be equitable for those vessels that fish in other areas and would not be allowed to retain any bluefin tuna.

Conclusion

This alternative is not preferred. While it provides NMFS with the authority to adjust retention limits within a season, as it has in other bluefin tuna quota categories (General and Angling), it does not provide NMFS with the authority to adjust the minimum target catch requirements. NMFS believes that the ability to adjust both the retention limits (by number) and the minimum target catch requirements (by weight) would better enable inseason management than the ability to adjust retention limits alone.

4.3.3 Alternative 3: Provide NMFS with Inseason Adjustment Authority to Adjust the Bluefin Tuna Retention Limits by Number of Fish and the Target Catch Requirement by Weight (Preferred Alternative)

This alternative would provide NMFS with inseason authority to adjust the bluefin tuna retention limits for pelagic longline vessels by number from a range of zero to three fish per trip and by weight within 25 percent of the target catch requirements (e.g., 2,000 lbs. to 2,500 lbs). NMFS would be able to adjust the limits through an inseason action, with 21 days public notice. This authority would be similar to the inseason authority NMFS has to adjust the General category bluefin tuna daily retention limit from zero to three bluefin tuna per vessel.

Ecological Impacts

The ecological impacts of this alternative would be minimal, in that overall mortality of bluefin tuna is controlled by quotas. This alternative could reduce mortality, however, if inseason authority were used to slow landings so that the longline quota were not closed and all incidentally caught bluefin tuna would have to be discarded.

Social and Economic Impacts

This alternative could prevent NMFS from having to completely eliminate retention of bluefin tuna by longline vessels, and thus could prevent negative impacts. If this inseason authority were not available, NMFS could not stop longline vessels in a particular area from landing the entire quota or subquota during a short period of time, which would not be equitable for those vessels that fish in other areas and would not be allowed to retain any bluefin tuna.

Conclusion

This alternative is preferred. It provides NMFS with the authority to adjust retention limits in season by number, as it has in other bluefin tuna quota categories (General and Angling), as well as by weight. This alternative could eliminate the negative effects of a premature closure of the Longline bluefin tuna quota or subquota. This alternative furthers the goals and objectives of this rulemaking and the HMS FMP, and is consistent with the Magnuson-Stevens Act and the National Standard Guidelines.

4.4 Cumulative Impacts of the Alternatives Considered

The 1999 HMS FMP adopted ICCAT's 20-year stock rebuilding program for western Atlantic bluefin tuna, which included, among other things, landings and dead discard quotas and inseason authority to open and close the fishing season and transfer quotas between bluefin tuna fishing categories. Among other things, ICCAT has recommended that bluefin tuna dead discards be minimized. The Revised Final Environmental Impact Statement (FEIS) for the HMS FMP concluded that the cumulative long-term impact of the final actions, which included the bluefin tuna rebuilding program, would be to establish sustainable fisheries for Atlantic tunas, swordfish, and sharks.

In July 2002, NMFS published a final rule and Final Supplemental Environmental Impact Statement (FSEIS) to implement a June 14, 2001, Biological Opinion that addresses reduction of sea turtle bycatch and bycatch mortality in HMS fisheries. Some of the measures adopted in the final rule are expected to have positive, but varying degrees of, direct, indirect, and cumulative impacts on sea turtle populations. Certain measures, such as the closure of the Northeast Distant Area (NED), are expected to have negative direct, indirect, and cumulative economic and social impacts, which are mitigated in the short-term for vessels that participate in an experimental fishery in the NED.

The alternatives considered in this EA/RIR/IRFA, which include adjustments to target catch requirements, the north/south boundary line and subquotas, and inseason authority, are not expected to change current fishing practices or cause impacts not previously addressed in the HMS FMP's Revised FEIS and the July 2002, FSEIS for sea turtle bycatch. Thus, NMFS anticipates that there will be no adverse, cumulative impacts on the environment from the preferred and other considered alternatives. In addition, as described in the discussion of the alternatives, NMFS expects that the preferred alternative would have positive ecological, social, and economic impacts.

5.0 Regulatory Impact Review

Under Executive Order (EO) 12866, Federal agencies are required to "assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. . . Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach." In compliance with EO 12866, the Department of Commerce and the National Oceanic and Atmospheric Administration (NOAA) require the preparation of a Regulatory Impact Review (RIR) for all regulatory actions that either implement a new Fishery Management Plan or significantly amend an existing plan, or may be significant in that they reflect agency policy and are of public interest. The RIR is part of the process of preparing and reviewing FMPs and regulatory actions and is intended to provide a comprehensive review of the

changes in net economic benefits to society associated with proposed regulatory actions. The analysis also provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problems. The purpose of the analysis is to ensure that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost-effective way.

Additionally, the Small Business Regulatory Enforcement and Fairness Act of 1996 amended the Regulatory Flexibility Act (RFA) and made compliance with the RFA subject to judicial review. The purpose of the RFA is to require agencies to assess the impacts of their proposed regulations on small entities and is intended to encourage Federal agencies to utilize innovative administrative procedures when dealing with small entities.

This section of this document assesses the economic impacts of the alternatives considered in the development of this rulemaking. However, certain elements required in an RIR are also required as part of an environmental assessment (EA). Thus, this section should only be considered part of the RIR. The rest of the RIR can be found throughout this document. Section 1 of this document describes the need for action and the objectives of the regulations. Section 3 of this document provides a description of the fishery that could be affected by the proposed rule. The alternatives considered are described in Section 4, and include modifications to the target catch requirements for bluefin tuna retention by pelagic longline vessels and providing NMFS with inseason authority to modify retention limits of bluefin tuna by longline vessels.

This section focuses on the impacts of this proposed rule on the pelagic longline fishery. The primary target species of that segment of the pelagic longline fishery is swordfish. Other segments of the pelagic longline fishery constitute a mixed fishery with swordfish, bigeye tuna, yellowfin tuna, and albacore constituting the target species. In addition to the fishermen, the related industries including dealers, processors, bait houses, and equipment suppliers are also part of this fishery.

5.1 Analyses of Alternatives

The alternatives presented in this EA/RIR/IRFA to modify the target catch requirements for bluefin tuna retention for pelagic longline vessels should increase vessels' landings and revenues from bluefin tuna. Bluefin tuna is a species caught incidentally by pelagic longline vessels, and it is assumed that no additional costs are incurred by longline vessels that catch them, so any increases in gross revenues would be increases in net revenues. The alternatives to provide NMFS with inseason authority to modify bluefin tuna retention limits by pelagic longline vessels should not have any direct impact on revenues, but could help prevent the negative impacts of closures.

5.1.1 Impacts on Fishermen

To assess the impacts of the alternatives on revenues throughout the fishery, the number of bluefin tuna that is estimated to be landed under each alternative was multiplied by the average weight of the bluefin tuna landed in 2000 (by area landed), which was then multiplied by the average price per pound for longline caught bluefin tuna in 2000 (again by area landed) to produce an estimate of revenues from bluefin tuna for each alternative. This was compared with the status quo to determine the percentage change in revenues. As described above, two estimates of status quo landings are used for comparative purposes in the northern area. The first is an estimation calculated using the method used to estimate landings under the various alternatives to change the target catch requirements; the second is actual landings from 2000. The estimated revenues from bluefin tuna landings for the various alternatives are shown in Table 9.

The preferred alternatives would increase the revenues from bluefin tuna in the pelagic longline industry by approximately 61 percent. As bluefin tuna catch is incidental to longline operations, vessels should incur no additional costs. Overall gross revenues for the Atlantic pelagic longline fishery are estimated to be approximately \$29 million per year (NMFS 2002a). The changes in revenues due to the preferred alternative would be about \$450,000.00, or about 1.1 percent of total gross revenues in the fishery. However, as all revenues from bluefin tuna could be considered net revenues because they are an incidentally caught species, an increase of \$450,000.00 in net revenues could be significant for the longline fishery as a whole, particularly given the cumulative impacts of recent conservation and management actions that affect these fishery participants (e.g., closed areas, gear modifications). As mentioned above, the preferred alternative to provide NMFS with inseason authority to modify bluefin tuna retention limits by pelagic longline vessels should not have any direct impact on revenues, but could help prevent the negative impacts of closures.

5.1.2 Impacts on Seafood Dealers

NMFS has little data regarding the wholesale price of fish or the costs to fish dealers or processors. However, NMFS does have information on the weight of fish that dealers buy from fishermen. In 2000, dealers purchased 56 bluefin tuna from vessels in the northern area, and 211 bluefin tuna from vessels in the southern area. The preferred alternative for adjusting the target catch requirements would almost double the number of bluefin bought in the northern area and would increase the number of bluefin tuna purchased in the southern area by about 25 percent.

Table 6 indicates the number of bluefin tuna landed under each alternative for adjusting the target catch requirements. In general, seafood dealers would be expected to benefit from the increase under Alternatives 2-6, however, without wholesale price information available, it is difficult to understand the magnitude of the positive economic impact. Under Alternatives 4 through 6, dealers who purchase bluefin tuna caught either in the northern or the southern areas would benefit. Under other alternatives, dealers purchasing southern area-caught bluefin tuna would not be affected. The preferred alternative to provide NMFS with inseason authority to

modify bluefin tuna retention limits by pelagic longline vessels should not have any direct impact on revenues to seafood dealers, but could help prevent the negative impacts of closures.

5.2 Conclusion

The preferred alternatives described in this EA/RIR/IRFA have been determined to be not significant for the purposes of EO 12866, as they would increase revenues in the pelagic longline fishery without any anticipated adverse economic impacts on fishermen, communities, or the economy generally, or any anticipated adverse environmental impacts. A summary of the expected net economic benefits and costs of each alternative can be found in Table 10.

6.0 Initial Regulatory Flexibility Analysis

NMFS has prepared an Initial Regulatory Flexibility Analysis (IRFA) to analyze the impacts on small entities of the alternatives for adjusting the target catch requirements, as described in Sections 2.1 and 4.1 of this document. Section 1 of this document describes the reasons why action is being considered and includes the objectives of, and legal basis for, the proposed rule. None of the preferred alternatives or alternatives considered would alter reporting, record-keeping, or other compliance requirements currently in place.

The analysis for the IRFA assesses the impacts of the various alternatives on the vessels that participate in the Atlantic pelagic longline fishery, all of which are considered small entities. In order to do this, NMFS has estimated the average impact that the alternatives to modify the target catch requirements would have on individual vessels. As mentioned above, the annual gross revenues from the Atlantic pelagic longline fishery are approximately \$29 million. There are approximately 171 pelagic longline vessels that are permitted to retain Atlantic tunas and swordfish, and average annual gross revenues per vessel are approximately \$168,000 (NMFS 2002a). The analyses for the IRFA assume that all pelagic longline vessels have similar levels of catch and gross revenues. While this may not be true, the analyses are sufficient to show the relative impact of the various alternatives on vessels. NMFS has, however, separated out pelagic longline vessels into three groups: vessels homeported in the northern area that landed more than one bluefin tuna on an individual trip during 1998-2000; vessels homeported in the northern area that landed one or less bluefin tuna on individual trips during 1998-2000; and vessels homeported in the southern area. Northern area vessels were separated into two groups because Alternative 2, described in Sections 2.1.2 and 4.1.2, would have a negative impact on the vessels that landed more than one bluefin tuna on a particular trip, as it would only allow retention of one bluefin tuna per trip in the northern area, whereas the status quo does not limit the number of bluefin tuna so long as the percentage of bluefin tuna did not exceed two percent of the weight of the other landings. During 1998-2000, six vessels landed more than one bluefin tuna on individual trips, and two vessels landed two bluefin tuna twice (total of eight trips). For these analyses, NMFS assumed that these six vessels would each have a trip in which they would have been able to land two bluefin tuna under the status quo.

Table 11 shows the change in gross revenues that could be expected on annual basis for a vessel in the pelagic longline fishery as a result of the various alternatives to modify the target catch requirements. The impacts on vessels were estimated by calculating the difference in the number of bluefin tuna that could be retained by the particular group of vessels, multiplying that number of fish by the average weight and price per pound for that area during 2000. In the northern area, the average weight of bluefin tuna landed by longline vessels in 2000 was 456 lbs., and the average per pound was \$5.56, for an estimate of \$2,535 per fish. In the southern area, the average weight of bluefin tuna landed by longline vessels in 2000 was 537 lbs., and the average price per pound was \$5.31, for an estimate of \$2,851 per fish. For Alternative 2, vessels in the northern area would land 72 bluefin tuna, 16 more than were landed in 2000. Using the average weight and price information for the northern area, the revenues from the additional 16 fish were divided among the 102 vessels in the northern area, for an average increase in gross revenues of \$398. For the six vessels that could have landed two bluefin tuna on a trip however, these vessels would lose the revenues from the second bluefin tuna, \$2,535. Thus, the change in gross revenues for each of these six vessels would be -\$2,137 (\$398 - \$2,535), approximately a -1.2% change. Vessels in the southern area would not experience any change in revenues under this alternative, as the target catch requirements would not change. As noted in Table 11, the impacts on revenues for the other alternatives were estimated in a similar manner. Other than Alternative 2, no alternative would have a negative impact on any vessel in the pelagic longline fishery, but even Alternative 2 would have a positive impact on all but a few vessels. Alternatives 4, 5 (preferred alternative), and 6 would have a positive impact on revenues for vessels in all areas. Thus, only one non-preferred alternative considered would have negative economic impacts; all preferred alternatives would minimize current negative impacts such that consideration of significant alternatives to minimize impacts to small entities is unnecessary.

The alternatives regarding providing NMFS with inseason authority to modify bluefin tuna retention limits by pelagic longline vessels should not have any direct impact on small entities. The preferred alternative, however, which would provide NMFS with this inseason authority, could help prevent negative impacts on small entities due to closures.

7.0 Mitigating Measures

The preferred alternative would assist NMFS achieve the objectives of (1) reducing bluefin tuna discards in the Atlantic pelagic longline fishery (2) without providing an incentive to target bluefin tuna and (3) allowing for landings of incidentally caught bluefin tuna within available quota, as well as provide NMFS authority to make inseason adjustments to meet those objectives. The preferred alternative would reduce overall mortality of overfished bluefin tuna, reduce discards consistent with ICCAT recommendations and Magnuson-Stevens Act requirements, and increase benefits to the Atlantic pelagic longline fishery. With inseason adjustment authority, NMFS will be able to monitor and make adjustments to the fishery closer to “real time.” Since NMFS will continue to monitor the fishery, any increase in directed fishing for bluefin tuna, should it occur, could be addressed within a fishing season.

8.0 Unavoidable Adverse Impacts

There are no unavoidable adverse impacts associated with the preferred alternative.

9.0 Irreversible and Irretrievable Commitment of Resources

There are no irreversible or irretrievable commitments of resources associated with the preferred alternative.

10.0 List of Agencies and Persons Consulted in Formulating the Proposed Rule

Discussions relevant to the formulation of the preferred alternative and the analyses for this EA/RIR/IRFA involved input from several NMFS components and constituent groups, including: NMFS Southeast Fisheries Science Center, NMFS Northeast Regional Office, NMFS Enforcement, and the members of the HMS and Billfish Advisory Panels (includes representatives from the commercial and recreational fishing industries, environmental and academic organizations, state representatives, and fishery management councils). NMFS has also received numerous comments from individual fishermen and interested parties.

11.0 List of Preparers/Contact Information

This EA/RIR/IRFA was prepared by Pat Scida, Brad McHale, Margo Schulze-Haugen, and Christopher Rogers from the HMS Management Division, Office of Sustainable Fisheries. Please contact the HMS Management Division, Northeast Regional Office, for a complete copy of current regulations for the Atlantic tunas fisheries.

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12.0 References

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13.0 Tables

Table 1: Initial Bluefin Tuna Quotas and Landings in Northern and Southern Domestic Management Areas, in Metric Tons

	1997		1998		1999		2000	
Fishing Area ¹	North	South	North	South	North	South	North	South
Longline Landings ²	19.5	27.3	22.9	23.7	16.9	50.9	11.6	51.3
Initial Longline Quotas	23	86	24	89	24	89	24	89

¹ North/South dividing line is located at 34°00' North latitude.

² Landings from HMS/NERO bluefin tuna landings database

Table 2: Longline Bluefin Tuna Dead Discard Estimates by ICCAT Management Area, in Metric Tons, Estimated using Logbook Tallies.

	1997		1998		1999	
ICCAT Area ¹	NWA	GOM	NWA	GOM	NWA	GOM
LL Discards ²	30.7	6.4	57	7	10.1	19.9

¹ NWA = Northwest Atlantic, GOM = Gulf of Mexico

Table 3a. Landings (Other than Bluefin Tuna) in Pounds, by Trip, for Vessels Using Longline Gear, 1998-2000. Source: SEFSC Weighout Data.

	North (NC and North)			South (SC and South)			All Areas		
	Jan - Apr	May - Dec	Year Round	Jan - Apr	May - Dec	Year Round	Jan - Apr	May - Dec	Year Round
Avg.	4,329	7,291	6,778	4,385	4,453	4,430	4,376	5,344	5,053
Median	3,301	4,039	3,787	3,074	3,526	3,336	3,490	3,675	3,501
75 pctl.	1,890	1,808	1,786	1,245	1,384	1,343	1,309	1,518	1,449

Table 3b. Landings in Pounds, by Trip, for Trips not Landing Bluefin Tuna, for Vessels Using Longline Gear, 1998-2000. Source: SEFSC Weighout Data.

	North (NC and North)			South (SC and South)					
	Jan - Apr	May - Dec	Year Round	Jan - Apr	May - Dec	Year Round	Jan - Apr	May - Dec	
Avg.	4,183	6,173	5,801	4,203	4,385	4,327	4,199	4,897	4,696
Median	3,202	3,586	3,474	2,770	3,388	3,128	2,854	3,451	3,228
75 pctl.	1,615	1,644	1,634	1,060	1,344	1,236	1,134	1,416	1,344

Table 3c. Landings (Other than Bluefin Tuna) in Pounds, by Trip, for Vessels Using Longline Gear, 1998-2000. Source: SEFSC Weighout Data.

	North (GA and North)			South (FL and South)			All Areas		
	Jan - Apr	May - Dec	Year Round	Jan - Apr	May - Dec	Year Round	Jan - Apr	May - Dec	Year Round
Avg.	3,747	6,682	6,080	4,559	4,534	4,543	4,376	5,344	5,053
Median	2,881	3,835	3,586	3,220	3,570	3,452	3,490	3,675	3,501
75 pctl.	1,428	1,805	1,718	1,249	1,337	1,301	1,309	1,518	1,449

Table 3d. Landings in Pounds, by Trip, for Trips not Landing Bluefin Tuna, for Vessels Using Longline Gear, 1998-2000. Source: SEFSC Weighout Data.

	North (GA and North)			South (FL and South)					
	Jan - Apr	May - Dec	Year Round	Jan - Apr	May - Dec	Year Round	Jan - Apr	May - Dec	
Avg.	3,590	5,691	5,232	4,398	4,463	4,441	4,199	4,897	4,696
Median	2,779	3,472	3,253	2,880	3,421	3,217	2,854	3,451	3,228
75 pctl.	1,408	1,662	1,615	1,040	1,268	1,177	1,134	1,416	1,344

Table 4. Number of Bluefin Tuna Reported in the Pelagic Logbook Program as Kept, Discarded Dead, or Discarded Alive.

Month	Area	Bluefin tuna kept				Bluefin tuna discarded dead							
		1997	1998	1999	2000	1997	1998	1999	2000	1997	1998	1999	
Jan	Closed	0	0	0	0	0	0	0	0	0	0	0	0
	Open	18	9	19	23	5	15	3	2	5	35	8	1
Feb	Closed	0	0	0	0	0	0	0	0	0	0	0	0
	Open	10	10	24	27	1	11	7	30	12	14	9	18
Mar	Closed	0	0	0	0	0	0	0	0	0	0	0	0
	Open	23	17	31	37	4	14	13	106	9	51	27	37
Apr	Closed	0	0	0	0	0	0	0	0	0	0	0	0
	Open	4	14	39	41	2	6	50	90	6	17	39	21
May	Closed	1	1	1	0	2	1	2	0	4	1	20	0
	Open	21	23	25	39	18	21	42	19	26	33	94	17
June	Closed	14	10	0	0	144	156	0	0	159	278	0	
	Open	29	25	29	15	56	182	87	18	42	194	124	23
July	Closed	3	13	7	0	3	32	2	6	15	53	6	6
	Open	35	30	11	12	32	20	5	33	57	35	12	9
Aug	Closed	0	0	2	0	0	0	0	0	0	0	0	0
	Open	23	6	9	4	1	2	1	3	5	2	0	0
Sept	Closed	0	0	0	1	0	0	1	0	0	0	0	0
	Open	12	4	0	8	0	1	0	1	0	4	0	2
Oct	Closed	0	7	6	7	0	9	0	16	1	30	2	68
	Open	9	25	12	5	0	0	0	7	0	1	0	131
Nov	Closed	7	10	2	5	7	14	1	0	6	20	0	15
	Open	5	11	9	3	0	11	1	9	7	33	1	9
Dec	Closed	10	1	2	1	22	3	1	2	39	0	0	9
	Open	10	16	15	1	14	4	5	10	11	6	45	16
Total		234	232			311	502			404	807		

Source: 2002 HMS SAFE Report.

Table 5. Number of Bluefin Tuna Kept and Discarded Inside and Outside of the June Closed Area, Northeast/Mid-Atlantic Bight, year-round.

	Closed area				Open area			
	1997	1998	1999	2000	1997	1998	1999	2000
Bluefin tuna kept	35	42	20	14	199	190	223	215
Bluefin tuna discarded	402	597	35	122	313	712	573	612

Source: 2002 HMS SAFE Report.

Table 6. Calculations of Bluefin Tuna Landings and Discards under Various Alternatives to Modify Target Catch Requirements. Figures in Parentheses are for the Preferred Alternative to Move the North/South Division Line.

Alt.	Area and Time	Avg. # of trips	% of trips that meet target catch reqts.	% of obs. trips that catch 1 BFT	% of obs. trips that catch 2 BFT	% of obs. trips that catch 3 BFT	# of BFT caught	# of trips that could land BFT	# of BFT that could be landed	# of BFT discarded	% change in discards from Status Quo
Stat. Quo	North	655 (818)	20.0 (16.2)	20.2				26 (27)			
	North	655 (818)	5.9 (4.7)		13.6			5 (5)			
	North	655 (818)	3.9 (3.1)			8.6		2 (2)			
	North Total						277 (346)		33 (34)	244 (312)	N/A
	South Jan - April	631 (576)	70.6 (71.0)	20.2	N/A	N/A		90 (83)			
	South May - Dec	1186	50.3 (50.8)	20.2	N/A	N/A		121 (111)			
	South Total						770 (701)		211 (194)	559 (507)	N/A
	Coast-wide Total						1047		244 (228)	803 (819)	N/A (+ 2.0)

Table 6. Calculations of Bluefin Tuna Landings and Discards under Various Alternatives to Modify Target Catch Requirements (Continued). Figures in Parentheses are for the Preferred Alternative to Move the North/South Division Line.

Alt.	Area and Time	Avg. # of trips	% of trips that meet target catch reqts.	% of obs. trips that catch 1 BFT	% of obs. trips that catch 2 BFT	% of obs. trips that catch 3 BFT	# of BFT caught	# of trips that could land BFT	# of BFT that could be landed	# of BFT discarded	% change in discards from Status Quo
Alt. 2	North	655 (818)	54.1 (50.9)	20.2			277 (346)	72 (84)	72 (84)	205 (262)	- 16.0 % (N/A)
	South		Same as	Status	Quo		770 (701)		211 (194)	559 (507)	0.0 % (N/A)
	Coast-wide Total						1047		283 (278)	764 (769)	- 4.9 % (- 4.2 %)
Alt. 3	North	655 (818)	54.1 (50.9)	20.2				72 (84)			
	North	655 (818)	34.7 (30.3)		13.6			31 (34)			
	North Total						277 (346)		103 (118)	174 (228)	- 28.6 % (N/A)
	South		Same as	Status	Quo		770 (701)		211 (194)	559 (507)	0.0 % (N/A)
	Coast-wide Total						1047		314 (312)	733 (735)	- 8.7 % (- 8.5 %)

Table 6. Calculations of Bluefin Tuna Landings and Discards under Various Alternatives to Modify Target Catch Requirements (Continued). Figures in Parentheses are for the Preferred Alternative to Move the North/South Division Line.

Alt.	Area and Time	Avg. # of trips	% of trips that meet target catch reqts.	% of obs. trips that catch 1 BFT	% of obs. trips that catch 2 BFT	% of obs. trips that catch 3 BFT	# of BFT caught	# of trips that could land BFT	# of BFT that could be landed	# of BFT discarded	% change in discards from Status Quo
Alt. 4	North		Same as	Alt. 3			277 (346)		103 (118)	174 (228)	-28.6 % (N/A)
	South		Same as	Status Quo	for one	fish		211 (194)			
	South	1817 (1653)	26.5 (27.8)		13.6			65 (62)			
	South Total						770 (701)		276 (256)	494 (445)	- 11.6 % (N/A)
	Coast-wide Total						1047		379 (374)	668 (673)	-16.8 % (-16.2 %)
Alt. 5 (Pref. Alt.)	North	655 (818)	72.4 (70.6)	20.2				96 (117)			
	North	655 (818)	34.7 (30.3)		13.6			31 (34)			
	North Total						277 (346)		127 (151)	150 (195)	- 38.5 % (N/A)
	South	1817 (1653)	65.7	20.2				241 (220)			
	South	1817 (1653)	26.5		13.6			65 (62)			
	South Total						770 (701)		306 (282)	464 (419)	- 17.0 % (N/A)
	Coast-wide Total						1047		433 (433)	614 (614)	- 23.5 % (23.5 %)

Table 6. Calculations of Bluefin Tuna Landings and Discards under Various Alternatives to Modify Target Catch Requirements (Continued). Figures in Parentheses are for the Preferred Alternative to Move the North/South Division Line.

Alt.	Area and Time	Avg. # of trips	% of trips that meet target catch reqts.	% of obs. trips that catch 1 BFT	% of obs. trips that catch 2 BFT	% of obs. trips that catch 3 BFT	# of BFT caught	# of trips that could land BFT	# of BFT that could be landed	# of BFT discarded	% change in discards from Status Quo
Alt. 6	North	655 (818)	79.6 (79.0)	20.2				105 (131)			
	North	655 (818)	34.7 (30.3)		13.6			31 (34)			
	North Total						277 (346)		136 (165)	141 (181)	- 42.4 % (N/A)
	South	1817 (1653)	71.8 (71.7)	20.2				264 (239)			
	South	1817 (1653)	26.5 (27.8)		13.6			65 (62)			
	South Total						770 (701)		329 (301)	441 (400)	- 21.1 % (N/A)
	Coast-wide Total						1047		465 (466)	582 (581)	- 27.5 % (27.5 %)

Table 7. Longline Bluefin Tuna Quotas under Various Alternatives, in Metric Tons

Area	Under Status Quo	Under Preferred Alternative
North	23.7 (21.1 %)	33.7 (30.0 %)
South	88.6 (78.9 %)	78.6 (70.0 %)
Total	112.3 (8.1 % of U.S. quota)	112.3 (8.1 % of U.S. quota)

Table 8. Summary of Bluefin Tuna Estimated to be Landed under Various Alternatives to Modify Target Catch Requirements. Figures in Parentheses are for the Preferred Alternative to Move the North/South Division Line (Include SC and GA in Northern Area).

Alternative	Area	Bluefin Tuna Landed	Metric Tons	% Change from Status Quo (Actual 2000 Landings)	Within Current Quotas?	Within Quotas under Pref. Alt.?
No Action/ Status Quo (Actual Landings from 2000)	North	56 (58)	11.6 (12.1)	N/A	N/A	N/A
	South	211 (209)	51.4 (50.9)	N/A	N/A	N/A
	Total	267 (267)	63.0 (63.0)	N/A	N/A	N/A
No Action/ Status Quo (estimated)	North	33 (34)	6.8 (7.0)	-41.9 % (-42.1 %)	yes (yes)	yes (yes)
	South	211 (194)	51.4 (47.3)	0.0 % (-7.0 %)	yes (yes)	yes (yes)
	Total	244 (228)	58.2 (54.0)	-7.6 % (-14.2 %)	yes (yes)	yes (yes)
Alternative 2	North	72 (84)	14.9 (17.4)	28.4 % (43.8 %)	yes (yes)	yes (yes)
	South	211 (194)	51.4 (47.3)	0.0 % (-7.0 %)	yes (yes)	yes (yes)
	Total	283 (278)	66.3 (64.7)	5.2 % (2.7 %)	yes (yes)	yes (yes)
Alternative 3	North	103 (118)	21.3 (24.4)	83.6 % (101.7 %)	yes (no)	yes (yes)
	South	211 (194)	51.4 (47.3)	0.0 % (-7.0 %)	yes (yes)	yes (yes)
	Total	314 (312)	72.7 (71.7)	15.4 % (13.8)	yes (yes)	yes (yes)
Alternative 4	North	103 (118)	21.3 (24.4)	83.6 % (101.7 %)	yes (no)	yes (yes)
	South	277 (256)	67.5 (62.4)	31.3 % (22.6 %)	yes (yes)	yes (yes)
	Total	379 (374)	88.8 (86.8)	41.0 % (37.8 %)	yes (yes)	yes (yes)
Alternative 5 (Preferred Alternative)	North	127 (151)	26.3 (31.9)	126.7 % (163.6 %)	no (no)	yes (yes)
	South	306 (282)	74.5 (68.9)	44.9 % (26.1 %)	yes (yes)	yes (yes)
	Total	433 (433)	100.8 (100.8)	60.0 % (60 %)	yes (yes)	yes (yes)
Alternative 6	North	136 (165)	28.1 (34.8)	142.2 % (187.6 %)	no (no)	yes (no)
	South	329 (301)	80.1 (73.6)	55.8 % (44.6 %)	yes (yes)	no (yes)
	Total	465 (466)	108.2 (108.4)	71.7 % (72.1 %)	yes (yes)	yes (yes)

Table 9. Summary of Revenues from Bluefin Tuna Retention under Various Alternatives to Modify Target Catch Requirements. Figures in Parentheses are for the Preferred Alternative to Move the North/South Division Line (Include SC and GA in Northern Area).

Alternative	Area	Revenues from bluefin tuna	% Change from Status Quo (Actual 2000 Landings)
No Action/Status Quo (Actual Landings from 2000)	North	\$142,188 (148,041)	N/A
	South	\$601,710 (595,857)	N/A
	Total	\$743,898 (743,898)	N/A
No Action/Status Quo (estimated)	North	\$83,352 (85,803)	- 41.4 % (- 42.0 %)
	South	\$601,710 (553,714)	0.0 % (- 7.1 %)
	Total	\$685,062 (639,517)	- 7.9 % (- 14.0 %)
Alternative 2	North	\$182,638 (213,282)	28.4 % (44.1 %)
	South	\$601,710 (553,714)	0.0 % (- 7.1 %)
	Total	\$784,348 (766,996)	5.4 % (3.1 %)
Alternative 3	North	\$261,086 (299,085)	83.6 % (102.0 %)
	South	\$601,710 (553,714)	0.0 % (- 7.1 %)
	Total	\$862,797 (852,799)	16.0 % (14.6 %)
Alternative 4	North	\$261,086 (299,085)	83.6 % (102.0 %)
	South	\$790,184 (730,481)	31.3 % (22.6 %)
	Total	\$1,051,270 (1,029,566)	41.3 % (38.4 %)
Alternative 5 (Preferred Alternative)	North	\$322,374 (391,017)	126.7 % (164.1 %)
	South	\$872,129 (806,573)	44.9 % (35.4 %)
	Total	\$1,194,503 (1,197,589)	60.6 % (61.0 %)
Alternative 6	North	\$344,438 (426,564)	142.2 % (188.1 %)
	South	\$937,685 (861,593)	55.8 % (44.6 %)
	Total	\$1,282,123 (1,288,157)	72.4 % (73.2 %)

Table 10. Summary of Net Economic Benefits and Costs for Each Alternative (other than the Status Quo) Considered to Modify Target Catch Requirements.

Alternative	Estimated Net Economic Benefits	Estimated Net Economic Costs
No Action/Status Quo	None	None
Alternative 2	Revenues from bluefin tuna could increase by about 3 - 5 percent in the pelagic longline fishery	None. As bluefin tuna catch is incidental to longline operations, no additional costs should be incurred by vessels if they are allowed to retain additional bluefin tuna.
Alternative 3	Revenues from bluefin tuna could increase by about 14 - 16 percent in the pelagic longline fishery	Same as Alternative 2
Alternative 4	Revenues from bluefin tuna could increase by about 38 - 41 percent in the pelagic longline fishery	Same as Alternative 2
Alternative 5 (Preferred Alternative)	Revenues from bluefin tuna could increase by about 61 percent in the pelagic longline fishery	Same as Alternative 2
Alternative 6	Revenues from bluefin tuna could increase by about 73 percent in the pelagic longline fishery	Same as Alternative 2

Table 11. Impacts on Revenues for Individual Vessels resulting from the Various Alternatives to Modify Target Catch Requirements (Include South Carolina and Georgia in Northern Area).

Alternative	Vessel Type	Number of Vessels	Avg. Gross Revenue per vessel	Change in Avg. Gross Revenues per vessel	% Change in Avg. Gross Revenues per vessel
No Action/ Status Quo	North 2 BFT/trip	6	172,000	N/A	N/A
	North ≤ 1BFT/Trip	96 (98)	172,000	N/A	N/A
	South	131 (129)	172,000	N/A	N/A
Alternative 2	North 2 BFT/trip	6	172,000	- 2,137 (-1,901)	- 1.2 %
	North ≤ 1BFT/Trip	96 (98)	172,000	+ 398 (634)	+ 0.2 %
	South	131 (129)	172,000	no change (- 261)	no change
Alternative 3	North 2 BFT/trip	6	172,000	+ 1,168 (1,463)	+ 0.7 %
	North ≤ 1BFT/Trip	96 (98)	172,000	+ 1,168 (1,463)	+ 0.7 %
	South	131 (129)	172,000	no change (- 261)	no change
Alternative 4	North 2 BFT/trip	6	172,000	+ 1,168 (1,463)	+ 0.7 %
	North ≤ 1BFT/Trip	96 (98)	172,000	+ 1,168 (1,463)	+ 0.7 %
	South	131 (129)	172,000	+ 1,415 (1,040)	+ 0.8 %
Alternative 5 (Preferred Alternative)	North 2 BFT/trip	6	172,000	+ 1,765 (2,267)	+ 1.2 %
	North ≤ 1BFT/Trip	96 (98)	172,000	+ 1,765 (2,267)	+ 1.2 %
	South	131 (129)	172,000	+ 2,068 (1,614)	+ 1.5 %
Alternative 6	North 2 BFT/trip	6	172,000	+ 1,988 (2,608)	+ 1.2 %
	North ≤ 1BFT/Trip	96 (98)	172,000	+ 1,988 (2,608)	+ 1.2 %
	South	131 (129)	172,000	+ 2,568 (2,034)	+ 1.5 %

14.0 Figures

Figure 1. Time/area Closure Adopted in HMS FMP to Reduce Discards of Bluefin Tuna in the Pelagic Longline Fishery.

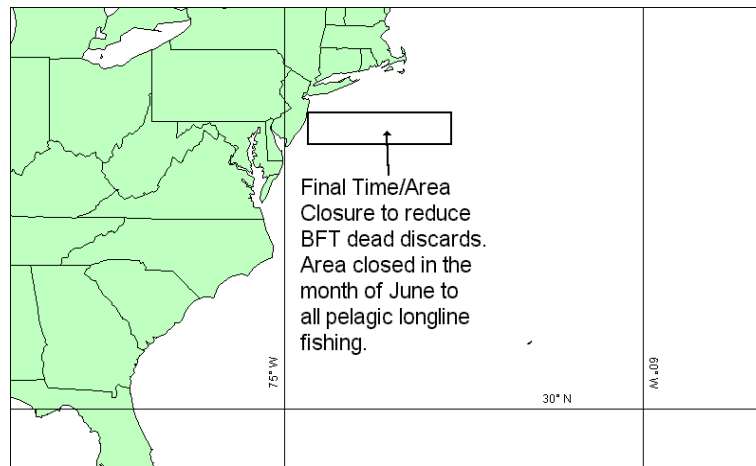
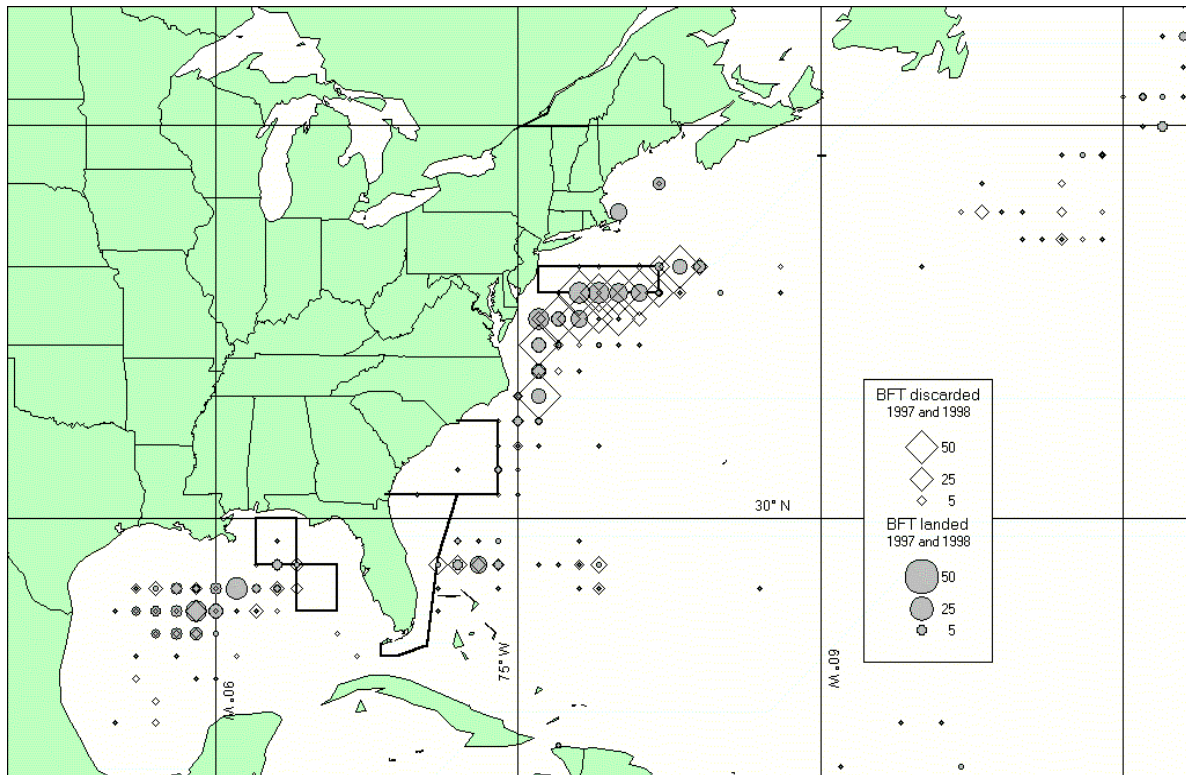
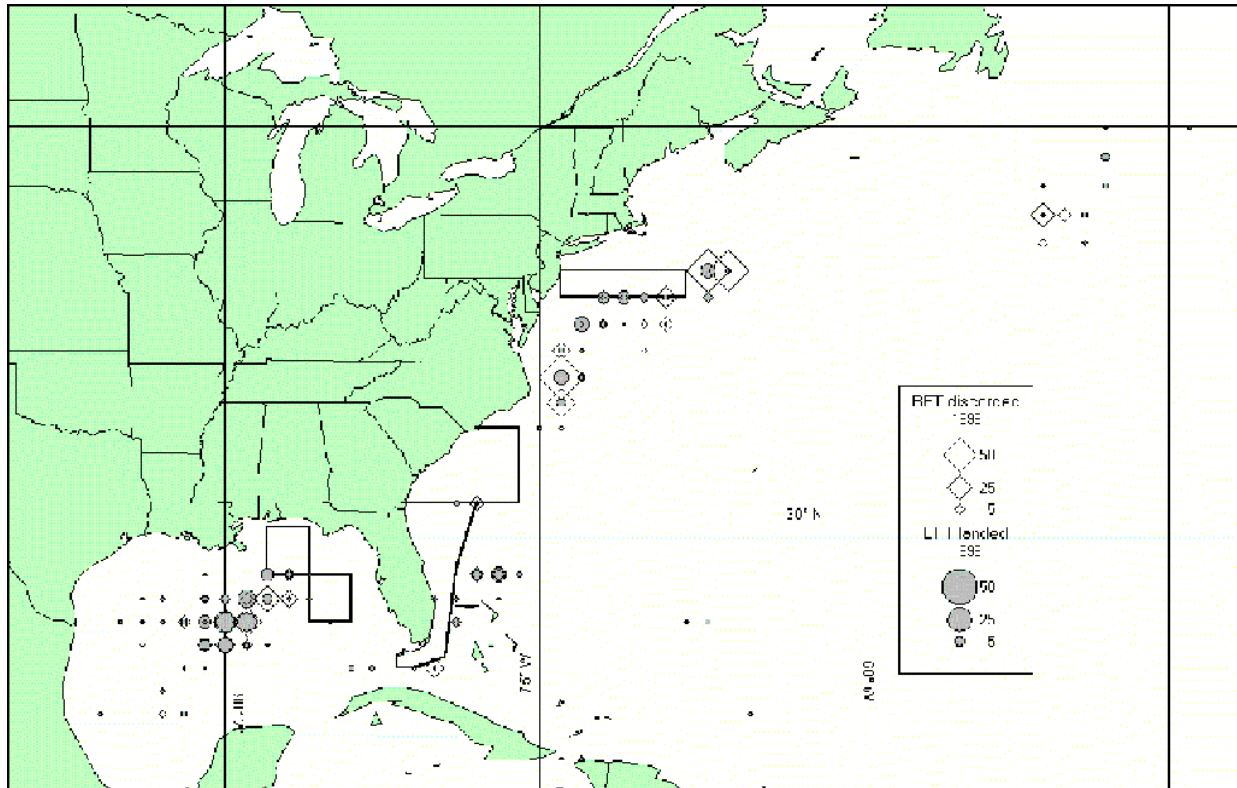


Figure 2. Location of Bluefin Tuna Discarded/Kept by Pelagic Longline Vessels, 1997-1998. Source: SEFSC Pelagic Logbook Reports.



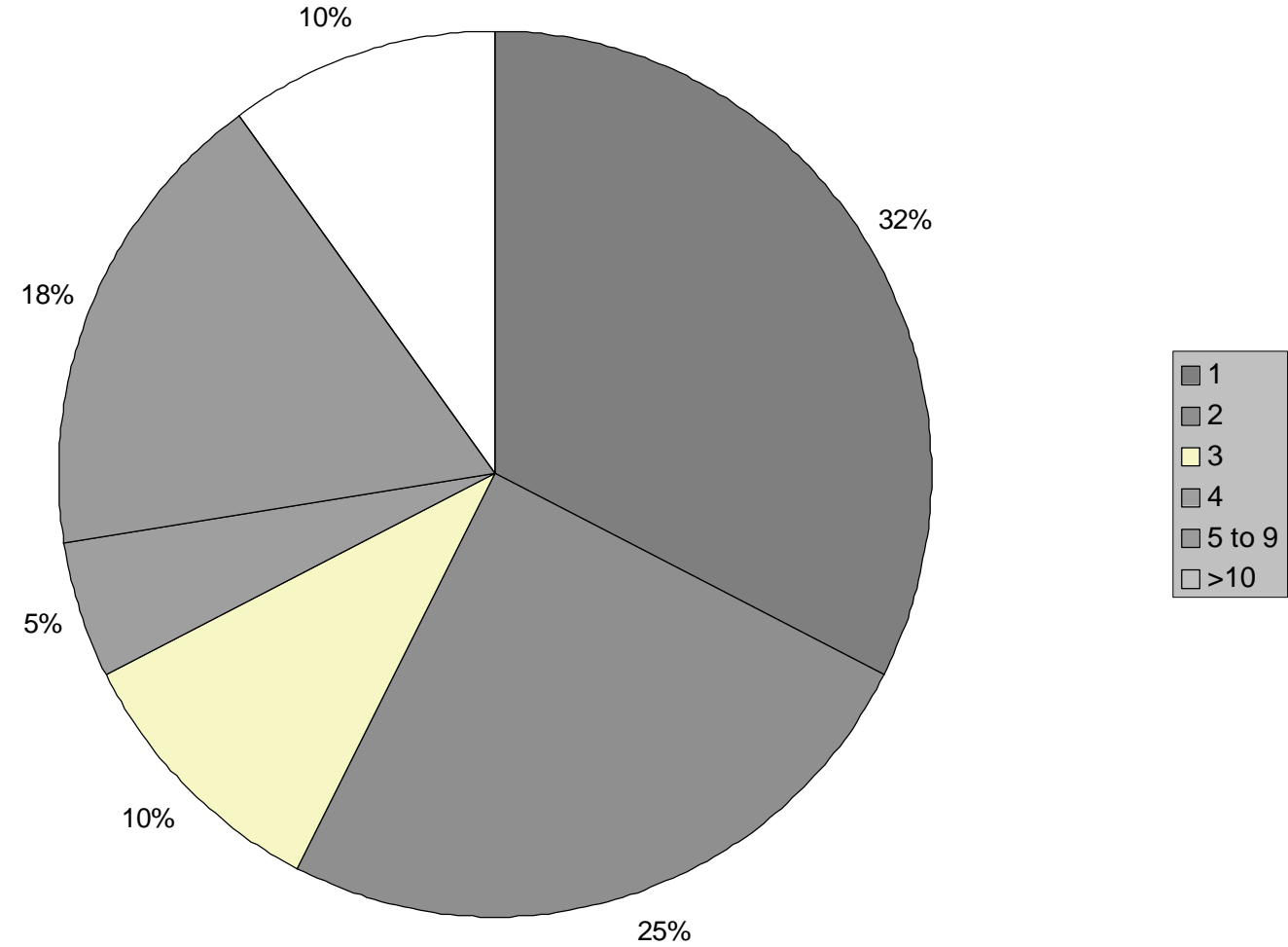
Note: Because of the manner in which this image was produced, the circles and diamonds showing bluefin tuna discarded and kept appear along the lower edge of the area in which they were caught/discarded. For example, the circles and diamonds along the lower edge of the mid-Atlantic closed area occurred in the closed area, but are shown along the bottom edge of the area in which they were taken.

Figure 3. Location of Bluefin Tuna Discarded/Kept by Pelagic Longline Vessels, 1999. Source: SEFSC Pelagic Logbook Reports.



Note: Because of the manner in which this image was produced, the circles and diamonds showing bluefin tuna discarded and kept appear along the lower edge of the area in which they were caught/discarded. For example, the circles and diamonds along the lower edge of the mid-Atlantic closed area occurred in the closed area, but are shown along the bottom edge of the area in which they were taken.

Figure 4. Numbers of BFT Caught on Observed Trips During Which at least One Bluefin Tuna was Caught, 1998-2000, All Areas



Appendix HMS and Billfish Advisory (AP) Panel Discussion of the Longline Incidental Bluefin Tuna Catch Limits - Joint Meeting of the HMS and Billfish APs, April 2-4, 2001

Much of the AP discussion focused on two different options brought to the AP by Bluewater Fisherman's Association (BWFA). Specifically the options suggested by BWFA were: (1) adjust the northern sub category from 2% of landed target catch to 10-12% of landed target catch OR 1 fish in order to reflect recent trends or (2) provide for the NMFS' Administrator to adjust the inseason- either subcategory or landing - requirements. Option one would allow a fishing vessel that brings in 4,000 lbs. of target fish to land a 400 lb. bluefin tuna. During the discussion it was noted that the current 2% limit does not equate to 1 fish; this forces many vessels to discard a dead bluefin tuna. AP members considered adding a cap, such as 2 or 3 bluefin tuna per trip, to this option to ensure that the 10-12% doesn't allow for a directed bluefin tuna in the pelagic longline fishery especially regarding the larger Grand Banks vessels. Other AP members considered changing the option to one where 3,000 or 3,500 lbs. of target catch has to be landed in order to land 1 bluefin tuna. Several AP members noted that setting this 3,000-3,500 lb. limit would allow large coastal shark fishermen, who have a 4,000 lb. trip limit of large coastal sharks, to land bluefin tuna. Other AP members supported a 1 fish per trip limit, regardless of the amount of target catch landed.

Other AP comments included:

- Do not move the north/south line. But if you have to - move it south. If you move it north, it will be problematic because that is where the effort is.
- Because the Gulf of Mexico is a spawning area, the situation in the Gulf of Mexico and Atlantic differs and should be treated differently. In the north, the regulations are part of an allocation scheme; in the south the regulations are due to ICCAT recommendations.
- Most longline sets do not catch more than 2 bluefin tuna. Disaster sets that catch more are extremely rare.
- The bluefin tuna spawning stock is in trouble and the encounter rate, and thus mortality rate, with pelagic longline has not decreased in the Gulf of Mexico.
- If NMFS switches to 1 fish per vessel, it is likely that smaller vessels would start highgrading on bluefin tuna.
- This fishery is under a limited access program and ICCAT recommendations and rebuilding plan so it is unlikely that a directed fishery will develop.
- Any bycatch allowance based on weight is difficult to enforce. NMFS should use unit counts instead.
- Economics does not support the idea that fishermen would develop a directed fishery in order to target 1 fish.
- Why would pelagic longline fishermen be more likely than anyone else to highgrade?
- NMFS needs to define where spawning sites may be outside of the Gulf of Mexico.
- The only way to enforce catch limits is on the dock, not at sea.
- Define incidental catch as 12% of the directed target catch, up to a maximum of 3 bluefin tuna, with a minimum of 3500 lbs. of directed catch on board per fish.
- Define as above, but with a minimum of 3000 lbs. directed per fish.

- NMFS Enforcement staff stated that the threshold limit is not a problem as long as number of fish (Bluefin tuna), which is more enforceable than percent by weight, is the measure.
- The main point is to ensure that there is a significant directed, non-Bluefin tuna catch associated with any landed bluefin tuna to ensure trips aren't directed at bluefin tuna.
- NMFS must evaluate the impacts of any proposal to go to numbers of bluefin tuna vs. 2% of catch.
- Will this allowance result in high-grading of bluefin tuna that are kept for landing? Not in the pelagic longline fishery since vessels would not likely take the time and effort to sort through the hold to remove smaller bluefin tuna if they catch a larger one.
- Several individuals commented that few boats ever take more than 2 bluefin tuna anyway, only likely to happen on Grand Banks trips; 90% of vessels would take less than 2 bluefin tuna.
- There was discussion that in the best of worlds technology would be available to allow use of water temperature to define closed areas. Possibly this will happen at some point.